

The Developing Authentic Assessment Instruments Based on Character on Skill Domain in Primary School

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Abstract: This development research aims to produce the character-based an authentic assessment instrument on the skill domain of students in primary school. Subjects of this study are: (1) primary school teachers; (2) primary school students; (3) Eight experts for validation of assessment instruments are expert: primary Mathematics, primary Science, primary Social, Indonesian Language, primary Civics, Assessment, Psychology, and Character Education. The method in this study is development research on the type of formative reasearch which the focused on two stages of preliminary and formative evaluation. Data are collected through questionnaires and field trials. Expert validation results and field trials show that the character-based authentic assessment instruments in the skill domain is valid and excellent categorized, and has a very high reliability. Thus, it can be concluded that the character-based on authentic assessment instruments is valid, reliable and feasible to use. Another finding of the results in this study is a character-based authentic assessment instrument can assist teachers in measuring the achievement of competence skills and also developing the students' character values.

Keywords: *authentic assessment; skill competency; character*

I. INTRODUCTION

The advanced nation is characterized by the character quality of a good society. Therefore, the implanting of character is very necessary at this time for Indonesian nation to be advanced. According to Hasan (2010: 3) character is a character, morality, or personality formed from the internalization of various virtues that are believed and used as the basis for the worldview, thinking, acting and acting. The virtue consists of a number of values, morals, and norms, such as honest, courageous, trustworthy, and respectful to others. The interaction of a person with others grows the character of society and the character of the nation.

Setiawan (2013: 137) suggests that good character is concerned with knowing the good, loving the good, and acting the good. Lickona (2000) argues that the character of a citizen includes several aspects which involve moral knowing, moral feeling, and moral acting. According Muhtadi (2013) a citizen is required to have a character and apply it in accordance with its role. The characters are:(a) the individual character that is unique and good values that are embedded within and ingrained in one's

behavior; (b) the private character that is respecting the human dignity of each individual; and (c) the public character that is the awareness of citizenship, politeness, heeding rules, critical thinking, willingness to hear, negotiate, and compromise.

Education is considered to play an important role in shaping the nature and the character of citizenship as described in Article 1 Paragraph 1 of Law Number 20 Year 2003 about National Education System, "Education is a conscious and planned effort to create an atmosphere of learning and the learning process so that student actively developthe self potential to have a spiritual strength, self-control, personality, intelligence, noble character, as well as the skills he the nation and the state need". The regulation is intended to make education in Indonesia not only to form smart Indonesian human beings, but also the personality or the character that will give birth to a developing and characterized nation generation.

The importance of character building in primary school age children needs to be supported by learning instrument that can support the strengthening of the students' character. One such learning instrument is an authentic assessment that is specifically to develop the character valuesof the citizenship. According to Majid (2014: 273), to achieve the value of character besides indirectly through various learning activities undertaken, the teachers are expected to conduct a directly achievement assessment of certain character values in the students.

But the facts on the field, not all teachers understand the concept and implementation of character-oriented authentic assessment. This is revealed by Rusilowati (Okezone.com, 2013) in a survey conducted on 20 of 23 teachers of SMP 21 Semarang. From these teachers, 87% still have difficulty in making the authentic assessments. From 23 respondents, 87% have difficulties in understanding the way of assessment, and 70% have difficulty in making observation instruments.

The above data is also supported by initial observation at primary school in Medan City, found by almost all teachers' difficulties in assessing. This is due to many teachers do not understand about authentic assessment, especially in assessing the students' characterachievement. From 5 primary schools in Medan that have been observed, all have expressed difficulties in carrying out authentic assessments in measuring the attainment

of certain character values in students. (Setiawan and Hadikusuma, 2015).

Authentic assessment instruments based on the character of citizenship are indispensable for the teachers to support the government programs that try to improve the nation's depletion through the re-grounding of Pancasila. However, there is no sample of authentic assessment instruments found in the character-based skills domain of citizenship that can be used as the guidance in the assessment of primary schools. Therefore, in this research, the developed authentic assessment instrument in the skill domain is to develop the character values of citizenship which aims to make the students to be skilled and active in learning, and have good character of citizenship. With the authentic assessment instrument, it is expected to facilitate the teachers in conducting the assessment and guidance of the character citizenship, especially in the skill domain.

Hosnan (2014: 387) argues that authentic assessment is a significant meaningful assessment of the learners' learning outcomes for the sphere of attitude, skills, and knowledge. In everyday academic life, the phrases of authentic assessment and authentic assessment are often exchanged. Muslich (2009: 47) says, the authentic assessment is the process of collecting various data that can provide a picture or information about the development of student learning experience. According to Hibart in Hosnan (2014: 388) various types of authentic assessment are; 1) performance assessment, 2) observation and questions, 3) presentations and discussions, 4) projects and investigations, 5) portfolios and journals. Authentic assessment assesses the knowledge and skills (performance) obtained by the students. The assessors are not only the teachers, but can be other friends or others.

The Government has set Educational Assessment Standards that can be as guidance for the teachers in conducting assessments in schools, namely Permendiknas RI Number 20 Year 2007 on Education Assessment Standards. In this standard there are many techniques and forms of assessment offered for the assessment, including in character assessment. In the character assessment, the teacher should develop an assessment instrument with a rating rubric to avoid the subjective judgment in the form of an observation assessment instrument (observation sheet) as well as an assessment instrument of attitude scale (e.g. Likert scale).

The character values serve as the main values derived from the grain of competency standards and subjects to be internalized within the students. According to Hasan (2013: 9-10) the character that must be possessed is: (1) religious; (2) honest; (3) tolerance; (4) discipline; (5) hard work; (6) creative; (7) independent; (8) democratic; (9) curiosity; (10) the spirit of nationality; (11) love the homeland; (12) appreciate achievement; (13) friendly / communicative; (14) love of peace; (15) likes to read; (16) care about the environment; (17) social concerns; and (18) responsibility.

II. RESEARCH METHODS

This research was conducted at SD Negeri 104202 Bandar Setia and SD Negeri 106811 Bandar Setia, which are located at Jl. V Hamlet of Bandar Setia, Percut Sei Tuan Subdistrict, Deli Serdang District. The research was conducted from April to December 2017 for the second academic year. The subjects of this study are: 1) Primary school teachers; (2) Primary school students; (3) seven experts for the validation of assessment instruments are expert validation of Primary Schools subjects for Mathematics, Natural Science, Social Sciences, Bahasa Indonesia, Civics, Assessment, and Psychology.

The method used in this research is a developmental research method of formative research type (Tessmer, 1998: 122). According to Tessmer, developmental research focuses on two stages, namely preliminary stage and formative evaluation stage. The instruments used in this study are: (1) expert validation sheet and (2) skill assessment instrument sheet. Character-based authentication validation instruments are questionnaires using Likert scale modified by the researcher to scale 4. The assessment criteria are classified into four levels with the following assessment: (1) *Not good*, (2) *Good Enough*, (3) *Good*, (4) *Very Good*, Sudjana (2007: 106).

The analysis of assessment results given by the experts on quality and eligibility of product uses descriptive analysis with the Mean Percentage formula (PRS) presented by Sudjana (2007) and the internal Reliability of all instruments proposed by Guilford in Suherman & Sukjaya (1990).

III. RESULTS AND DISCUSSION

3.1 Development of Authentic Assessment Instruments

The development of an authentic assessment instrument is carried out to meet the completeness of the assessment that is missing from the teacher's book or the student's book. The development of an authentic assessment instrument is only conducted on all the themes contained in the fourth grade of primary school, especially in the skill domain that aims to develop the character values of the citizenship. The development of this assessment instrument is also based on the types of authentic assessment of the skill domains found in the Curriculum 2013 that covers performance, project and portfolio assessments, and tailored to the skills competencies and citizenship character to be developed. An example of the learning scope that will be developed for Class IV SD on theme 1 subtheme 1 is presented in Table 1:

Table. 1 Learning Scope, Theme 1 Subtheme1

Meeting	Learning Activity	Type of Authentic Assessment	Competence Skills
1	<ul style="list-style-type: none"> Knowing the diversity of Indonesian culture Understanding the diversity of culture Expressing with song 	<ul style="list-style-type: none"> Performance Portfolio 	Communicating
2	<ul style="list-style-type: none"> Exploring about the corner with the traditional house Understanding the cultural diversity of traditional houses Understanding the diversity of traditional dances 	<ul style="list-style-type: none"> Projects Portfolio 	Scientific work (measuring).
3	<ul style="list-style-type: none"> Playing a traditional game Implementing the values of Pancasila Writing the interacting experiences with others Creating posters on diversity 	<ul style="list-style-type: none"> Performance Portfolio 	Make a poster.
4	<ul style="list-style-type: none"> Knowing the traditional musical instruments Exploring the source of sound Be creative with sounds Telling about the values of Pancasila 	<ul style="list-style-type: none"> Projects Portfolio 	Scientific work (producing sound)
5	<ul style="list-style-type: none"> Exploring about the sound propagation media Writing a report Creating a custom home of dreams 	<ul style="list-style-type: none"> Performance Project 	Portfolio of Scientific work (propagation of voice) and making a collage of traditional house
6	<ul style="list-style-type: none"> Exploring in many ways Analyzing a story text 	<ul style="list-style-type: none"> Performance Portfolio 	Creating a story text.

3.2 The Expert Validation

Based on the validation achievement of experts score, it can be presented in **Table 2**:

Component	Sub-Component	Scor	%	Criteria
Objectivity	1. The ability of the instrument to measure student ability	26	92,86	Very Good
	2. The ability of the instrument to measure students according to the actual circumstances	26	92,86	Very Good

Component	Sub-Component	Scor	%	Criteria
Average			92,86	Very Good
Systematic	1. Instrument compatibility with learning indicators	25	89,29	Very Good
	2. Assessment instruments are systematically and coherently arranged	26	92,86	Very Good
Average			91,07	Very Good
Construction	1. The truth of the sentence arrangement on the developed assessment instrument	24	85,71	Very Good
	2. The writing of sentences on the developed instrument has no double meaning	27	96,43	Very Good
Average			91,07	Very Good
Linguistic	1. Proper use of Indonesian language rules on writing developed instruments	23	82,14	Good
Average			82,14	Good
Practicality	1. Ease of implementation of assessment instruments developed	27	96,43	Very Good
	2. Ease of assessment instruments developed for general use	24	85,71	Good
Practical Average			91,07	Very Good
Total Average			90,47	Very Good

Figure.1 Expert Validation Result



Based on figure 1 then it can be concluded that each component has a varied category that is good and very good. Overall the average value of 5 components and 9 sub-components got an average score of 90.47 or very good category. Thus it can be stated by the validator that the validation result of the authentic assessment instrument in the skill domain is good and feasible to be used to develop the character values without any revision note on certain sub component.

3.2 Field Trial

Field trials are aimed at fulfilling the eligibility element of the fourth grade students' skills assessment instrument. Prior to the implementation of field trials, the researchers and the teachers held discussions on the implementation of assessments tailored to the learning indicators. The researcher provides an authentic scoring manual containing KI, KD and indicator maps, learning scope, performance assessment rubric, project assessment, and portfolio assessment. The researcher explains

each of the usefulness of the assessment type and also how it is used. Discussion results aimed to avoid errors or obstacles experienced by teachers and students in using authentic assessment instruments that may be fatal in the results of field trials.

The implementation of field trial is divided into two scales: small-scale testing and large-scale trials conducted on students and fourth grade teachers at the State Elementary School 104202 Bandar Setia and SD Negeri 106811 Bandar Setia.

Small-scale trials were conducted in the fourth grade of the SD Negeri104202 Bandar Setia and SD Negeri 106811 Bandar Setia, each school making 15 students and 2 class teachers as research samples. The character-based skills assessment tools developed on each sub theme are not the same, this is due to the adjustment of skills assessed by the learning indicators on each sub theme. Indicators of learning at each meeting in a sub theme is not the same, because every day students learn with different subjects but are integrated in the theme and sub theme theme. In the 2013 curriculum teacher books have been established skills assessed in each learning, but not yet appropriate among indicators of learning with skills to be achieved. Therefore, the development of authentic assessment (especially skill) is adjusted to the character of elementary school students and learning indicators on each sub theme.

The small-scale tests are conducted in Class IV with 1 theme: The Beauty of Togetherness, and has 3 sub themes: *The Cultural Diversity of My Country*; *Togetherness in Diversity*; and *Gratitude for Diversity*. The small-scale tests are conducted in the first three weeks of the 2017/2018 academic Year on July 17 - August 5, 2017 by applying 1 sub theme each week.

Based on the small-scale tests, it is found that the teachers or the students do not experience obstacles in using the authentic assessment instruments in the skills domain for theme 1, *The Beauty of Togetherness*. However, students received low skill score on theme 1 subject with performance assessment type. This is because some students are not familiar with the tasks that train students' skills independently. In the assessment of the project assessment instrument, no constraints were found and the scores obtained by the students were also moderate category, because the project assessment is assessed from group assignment so that each score member got the same score i.e. group score. In the application of portfolio assessment also found no obstacles because the assessment is a recapitulation of the authentic assessment of the skill domain every week or every sub theme.

In sub theme 2, the teacher helps the researcher to direct the students to understand and the spirit of performing the performance duties and from the research result found that there is an increase of score from sub theme 1 to sub theme 2. But the score is still categorized *High*, and the score increase found in third a developed skill assessment instrument. In sub theme 3, students are increasingly motivated to attain a defined skill competence at each meeting so that an increase in scores from

sub theme 2 to sub theme 3. In fact, scores from small-scale trials on sub theme 3 scored *very high*. The small-scale test results indicate that there is no need to revise or improve the assessment instrument, but only the improvement of the instrument's instruction manual is required.

In the small-scale trial results no obstacles or difficulties for teachers are found, so the field trials can proceed to a large-scale pilot phase. Large-scale trials were conducted in the fourth grade of the SD Negeri104202 Bandar Setia and SD Negeri 106811 Bandar Setia, each school making 60 students and 2 class teachers as research samples. The large-scale trials are conducted in two stages. The large-scale trials in the first stage were conducted on August 14 - September 2, 2017 by applying the second theme, namely: *Always Save Energy*. The second theme has the translation of 3 sub themes, namely: (1) *Various Sources of Energy*; (2) *Energy Usage*; and (3) *Style and Motion*. The large-scale trials of the second stage were conducted on 4 - 23 September 2017 by applying the third theme: *Care for The Living Things*. The third theme also has the translation of 3 sub themes: (1) *Animals and Plants in My Home Environment*; (2) *The diversity of Living Things in My Environment*; and (3) *Come On, Love the Environment*.

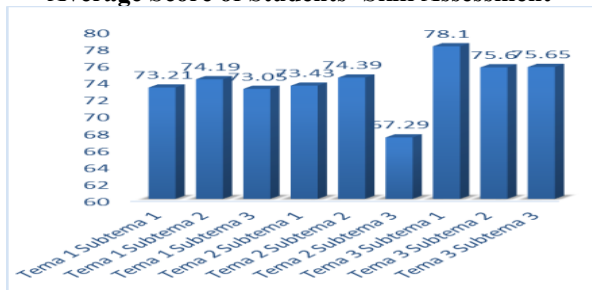
The results of large-scale trials of the first stage found that teachers or students did not experience any obstacles in using a character-based skills assessment tool on the second theme (*Always Save Energy*), but the results of the study found that students experience a decrease in the score on the theme 2 subtheme 2. The decreased score is not a constraint because there is only a score of 0.79. From the results of large-scale trials the first stage concluded that there is no need to revise the assessment instrument because although there is a decrease but still get high category.

A large-scale trial of the second stage is still in the process of research so that cannot be drawn conclusions of research results. The results of field trials, both from small scale and large scale of the first stage indicate that the character-based skills assessment instrument developed has good and reliable validity. Even the average scores obtained from the field trial results obtained almost similar data as presented in Table 3 and figure 2:

Table 3 Average Score of Assessment of Each SubTheme

Theme	Subtheme	Score Average	Category
1	1	84,43	High
	2	88,21	High
	3	90,19	Very High
2	1	90,39	Very High
	2	89,60	High
	3	91,43	Very High
3	1	91,65	Very High
	2	92,39	Very High
	3	93,10	Very High
Total Average		90,15	Very High

Figure.2
Average Score of Students' Skill Assessment



Based on Table 3 and Figure 2, it is found that from the authentic assessment instrument in the skill domain to develop the character values of citizenship on the theme 1 subtheme 1 to theme 3 subtheme 3 experienced a significant increase score, so that a score on the average total score obtained 90.15 and has a *very high* category. The results of field trials also show that overall authentic assessment instruments in the skill domain to develop character values have a *very high* degree of reliability as presented in Table 4 and Figure 3:

Table. 4 Reliability of Instruments for Each SubTheme

Theme	Subtheme	Score Average	Category
1	1	0.774	High
	2	0.785	High
	3	0.815	Very High
2	1	0.820	Very High
	2	0.792	High
	3	0.825	Very High
3	1	0.834	Very High
	2	0.835	Very High
	3	0.848	Very High
Rata-rata Total		0.814	Very High

Figure. 3
Reliability Test Result



Based on the expert validation and the field trials, it can be concluded that the authentic assessment instrument in the developed skills domain in Primary School in this research meets the criteria of *very high* reliability with 0.814 score so it is worthy to be used as a measuring tool and develop the students' character values.

IV DISCUSSION

The results of this research are not merely developing the authentic assessment instruments in the skills domain but also developing the character values of citizenship that are compatible with each learning and skills competence to be achieved. The authentic assessment instruments in the skill domain are developed in the form of three types of assessment, namely: performance assessment, project assessment, and portfolio assessment.

Expert validation results indicate that the entire assessment instrument developed is valid or feasible to use without a revised record of the validator. Thus, the assessment instrument developed subsequently subjected to test subjects or field trials.

Based on the results of small-scale and large-scale field trials on each sub theme, it is known that performance assessment, project assessment and portfolio assessments show an increase in scores, or in other words that character values are well established, so assessment instruments developed the whole is declared valid and deserves to be used as a character-based skills assessment instrument.

It is based on the average score of the students' skills obtained from the authentic assessment instrument in the field of skills for themes 1 sub-theme 1 to theme 3 sub-theme 3 has a significant score increase, resulting in a score on the average total score of 90.15 or has a *very high* category. Even the results of the reliability test on the results of field trials also showed an increase in reliability scores so that on average reliability test obtained a score of 0.814 with the category of reliability is *very high*. The results of field trials show that the overall authentic assessment instruments in the developed skill domain have a *very high* category of reliability.

The findings of this study are supported by several previous studies published in international journals, among which are research conducted by Fatonah (2013) in various districts of Magelang, assessments made in science learning SD/MI using written tests, such as replay subject, general test and home duties (100%), while performance assessment and unfinished self-assessment (0%). This is in accordance with Lickona's theory and the results of previous research published in international journals by Ma'zumi (2012) which shows that the development of the nation's character is to form a strong, competitive, moral, tolerant, cooperative, patriotic, dynamic, science and technology-oriented and based on Pancasila and driven by faith and piety to God Almighty. Lickona (2000) argues that the character of a citizen includes several aspects involving knowledge (moral knowing), feeling (moral feeling), and action (moral acting). The three components according to Lickona are worth noting in education so that students realize, understand, feel, and practice values of goodness in daily life as a whole and comprehensive.

Other international journals also support Lickona's statement about the importance of character, namely: Silay's (2014) study revises the meaning of citizenship and remembering the quality

of an ideal citizen is essential before moving on to the next step. A good citizen is a requirement as an individual who has value, morals and acts for society. Education can be defined as a conscious effort to increase students' political and legal knowledge and also to encourage them to act in their own societies. The teaching of values and morals is a component of inseparable character from education. Students need to learn to be constructive in everyday life; politics and taking part in this aspect of life should be regarded as a natural way of life. Therefore, every citizen must have a good character. Students are the nation's successor citizens so it is necessary to develop good characters to become citizens who uphold the sense of nationalism, not just have the skills, knowledge or attitude based on the curriculum of education.

Based on the findings of this study and also the findings of some previous research, it can be concluded that the development of this authentic research instrument becomes very important because it is based on character and also develops student skills. This is based on the results of the research which indicates that the authentic assessment instrument in the skill domain developed in this study meets the criteria of validity and reliability is very high so it is worthy to be used as a character-based skills tool. Thus it can be concluded that the development of authentic assessment instruments in the skill area developed has been feasible for use for grade 4 primary school students.

VI. CONCLUSION

The initial observation results about the existence of the assessment instrument indicates that the authentic assessment instruments in the skill domain which is specifically developed to improve the character values of civic have not been applied in primary school. The validation expert results indicate that the authentic assessment instruments in the skill domain are good and worthy to be used to develop the character values of citizenship without any revision notes on certain sub-components.

The results of field tests show that the authentic assessment instrument in the skill domain to develop the character values of citizenship on theme 1 subtheme 1 to theme 3 subtheme 3 experienced a significant increase in the score, so that the scores obtained on the average total score is 90.15 and has a *very high* category. The results of field tests also show that overall authentic assessment instruments in the skills domain to develop the characters values of citizenship have a *very high* degree of reliability. Thus, from the results of validation expert and the field tests, it can be concluded that the authentic assessment instrument in the developed skill domain has been *valid* and reliable with a *very high* category, so the instrument is worthy to be used in measuring the students' character values of citizenship.

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