

Development of Junior High School Students' Character Assessment Instruments

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Abstract

The purpose of this study is to develop character assessment instruments to measure the character of junior high school students after obtaining learning by using innovative learning models based on character education. This research is a development research that refers to Borg and Gall's development models. The instrument used to measure student character was a self-assessment questionnaire of student character ownership and student character observation sheets. The trial of the use of the instrument was carried out at SMPN 19 Pontianak. Data collected by using questionnaires and unstructured interviews. Data analysis was performed by testing the validity and reliability of the instrument. The results show that the character assessment instruments produced were valid and reliable.

Keywords: character assessment instrument, valid, reliable

INTRODUCTION

This research is part of the research development of innovative learning models to develop the character of junior high school students. In addition to developing an innovative learning model book based on character education and a character learning design guide book for junior high school teachers. This study also developed a student character assessment instrument. The instrument was in the form of a self-assessment questionnaire for student character ownership and student character observation sheets. These instruments are used to evaluate the use of innovative learning models in improving student character.

The development of innovative character-based learning models is needed to support the implementation of 2013 curriculum. The national education ministry has launched national character education on May 2, 2010, and it is targeted that all schools have integrated character education in learning in 2014.

The character education implemented in schools is not taught in specific subjects but is internalized in subjects taught in schools. Character education if given as a special subject, it is feared to be trapped as knowledge, not as an attitude and deed. As with civic education and religious education that has been taught at various levels of school, often trapped only as a knowledge that must be mastered by students and not as attitudes and actions that must be done every day. Therefore, in 2013 curriculum, character education is carried out by integrating character values in all subjects.

The results of the preliminary study of researchers showed that teachers complained about the absence of clear guidelines for integrating character education in the lessons they taught. A character-based learning design is needed so that teachers can implement character education in the subjects they teach. The results of this preliminary study are in line with the results of research by Sardjijo and Ali (2017) which found that teachers could write down what types of characters they developed in the lesson plan, but in their implementation, most teachers did not understand how to emphasize the types of characters written in the lesson plan to be implemented in the learning process.

This research attempted to develop innovative learning models based on character education, which is one of the important components in character education at schools. Aisyah (2014) in her research concluded that the application of character education using the contextual learning model made students had a belief, attitude, behavior, motivation and good skills according to the culture and character of the Indonesian nation. The design of character education as a result of the research is expected to be able to build students' character.

Learning models are developed for learning in junior high school. This study took three subjects as a starting point for the development of character education-based learning models, namely mathematics, Natural Sciences (IPA), and Pancasila and Citizenship Education (PPKn). PPKn represents subjects directly related to character education, with the hope that through the learning model developed, these subjects can truly build student character, not only as knowledge that students must master. Mathematics and Natural Sciences represent subjects that are not directly related to character education, with the hope that through the learning model developed, teachers can build students' cognitive abilities while building their character.

Innovative learning models need to be designed so that in addition to achieving cognitive goals, they can also build student character through the use of these learning models in the classroom's learning. The learning models developed must be equipped with a learning design guidebook for teachers as well as instruments to measure the achievement of the intended character values. Therefore, the development of character assessment instruments is an important part of this research. The purpose of this study is to develop character assessment instruments to measure the character of junior high school students after obtaining learning by using innovative learning models based on character education.

METHOD

Following the aim, this study proceeded under the research and development approach (R & D) which primes to develop character assessment instruments. The development of instruments incorporated the development model from Borg and Gall (1983). Borg and Gall's model comprises ten major steps. However, the 10-step procedures were adapted and modified into six stages for adjustment to the real condition in the field and reason of practically. The following paragraph explores the six-stage procedure(S).

The first step is a needs analysis, in this section, explained the need to develop a character assessment instrument. The second step is gathering

information as a basis for designing the form of instruments that will be developed to assess student character. The third step was designing character assessment instruments. The instrument for assessing student character consists of a self-assessment questionnaire of character ownership and an observation sheet

The fourth step was an assessment (a validation) of character assessment instruments by the experts. Above all, improvements in the character assessment instruments text were carried out referring to the feedback from the experts. The assessment of each aspect of character assessment instruments was analyzed with a Likert scale, that is, very feasible, feasible, quite feasible, and less feasible. Very feasible is scored 4, feasible 3, quite feasible 2, and less feasible 1. The next step was calculating the average score on each aspect of the assessments from all members of experts and the average scores were categorized as in Table 1.

Table 1. The Assessment of Character Assessment Instrument

average score (\bar{x})	category
$3.25 < \bar{x} \leq 4$	very feasible
$2.50 < \bar{x} \leq 3.25$	feasible
$1.75 < \bar{x} \leq 2.50$	quite feasible
$1.75 < \bar{x} \leq 1$	less feasible

The results obtained from the validation are followed up with revisions of the validation results. Revisions of the validation results are the fifth step of the development process.

The sixth step in the development of the character assessment instrument was field testing. Field testing was conducted in the classroom to the seventh-grade students at one of the lower secondary school in West Kalimantan. The researchers distributed the character assessment instrument to 31 students to calculate the validity and reliability of character assessment instruments.

Quantitative analysis emphasizes the empirical validity by analyzing instruments after field-testing the instrument (Surapranata, 2009). Empirical validity analysis on student character ownership self-assessment questionnaires and observation sheets was conducted to measure the degree of validity as an instrument using the product-moment correlation equation (Riduwan, 2013). Product moment correlation was used because the self-assessment questionnaire of student character ownership and student character observation sheets had a type of polytomy answer score, which was different from multiple-choice questions (dichotomous scores) that could be analyzed for validity with biserial point correlation (Matondang, 2009).

The reliability of the self-assessment questionnaire of student character ownership and student character observation sheets was analyzed using the Cronbach alpha equation (Sugiyono, 2013). Instrument reliability can be measured by the equivalent method, test-retest, equivalent repetition, internal consistency and observer approval (Suparno, 2010). The reliability of the self-

assessment questionnaire of student character ownership and student character observation sheets in this study were analyzed to determine the level of consistency of the instrument.

FINDINGS AND DISCUSSION

The description of the results of this study is divided into three parts, namely (1) needs analysis and design of character assessment instruments, (2) validity of character assessment instruments by the experts, and (3) validity and reliability of character assessment instruments of the result field testing.

Needs analysis and design of character assessment instruments

The first and second step of developing character assessment instruments is needs analysis and information gathering. Character assessment instruments need to be developed to measure the effectiveness of the use of innovative learning models based on character education so that researchers can find out whether after the teacher applies the innovative learning models based on character education contained in the learning design handbook, student characters significantly increase or not.

Kesuma, Triatna, & Permana, (2011) mentions that the objectives of character education evaluation are: (1) knowing the progress of learning outcomes in the form of ownership of a certain number of character indicators for students in a certain period of time, (2) knowing the weaknesses and strengths of the learning design created by the teacher, (3) determine the level of effectiveness of the learning process experienced by students, in classroom settings, schools, and homes.

Information gathering conducted by researchers is to analyze the core competencies and basic competencies of three subjects, namely PPKn, mathematics, and natural sciences to conclude what character will be measured in the character assessment instrument. From the analysis results obtained, the character assessment instrument must include 14 character values, namely honesty, responsibility, discipline, care, politeness, confidence, hard work, curiosity, appreciative, creative, religious, loving the motherland, communicative, and independence.

The third step of development is to design a character assessment instrument. From the results of the researchers' analysis, the researchers used two instruments to assess student characters, namely the self-assessment questionnaire of student character ownership filled in by students and student character observation sheets filled in based on teacher observations. Questionnaire self-assessment of student character ownership to measure the character of honesty, responsibility, discipline, care, politeness, confidence, hard work, curiosity, appreciative, creative, religious, love the motherland, communicative, and independence, with a total of 34 questions. Student character observation sheet to measure the character of honesty, responsibility, discipline, care, politeness, and confidence. The observation sheet was used to observe 15 students. Five students were observed by PPKn teachers, 5 students were observed by mathematics

teachers, and five were observed by science teachers. The following are indicators questionnaire of self-assessment of student character ownership.

Table 2. Indicators Questionnaire of Self-Assessment of Student Character Ownership

No	Character	Indicators	Total	Item number
1.	Honesty	1. Avoid plagiarism. 2. Avoid cheating on the test.	3	1, 2, 3
2.	Responsibility	1. Take the assignment seriously 2. Apologize if they made a mistake 3. Dare to accept the risk of actions taken.	3	4, 5, 6
3.	Discipline	1. Carry out tasks/ work according to standards and rules. 2. Learn with a regular schedule.	3	7, 8, 9
4.	Care	1. Give help to the people need. 2. Can work together.	3	10, 11, 12
5.	Politeness	1. Use polite language when expressing opinions 2. Respect for older people 3. Say thank you when helped by others.	3	13, 14, 15
6.	Confidence	1. Dare to have an opinion or presentation in front of the class 2. Dare to ask or answer teacher questions.	3	16, 17, 18
7.	Hard work	Using all abilities, means, and time to achieve learning success.	2	19, 20
8.	Curiosity	1. Find other learning resources, other than that provided by the teacher. 2. Ask the teacher, if there are things that are not understood	2	21, 22
9.	Appreciative	1. Appreciate friend's achievements 2. Acknowledge lack of self without reducing the spirit of achievement.	2	23, 24
10.	Creative	1. Able to complete tasks with various alternative solutions 2. Able to complete tasks with various alternative approaches.	2	25, 26

11	Religious	1. Pray when will start learning 2. Have gratitude to God.	2	27, 28
12	Love the motherland	1. Proud as an Indonesian nation 2. Preserve Indonesian culture.	2	29, 30
13	Communicative	1. Have actions that show pleasure in talking 2. Having an attitude of easy to get along with other people.	2	31, 32
14	Independence	1. Have the ability to always try to take the initiative in everything 2. Do not depend on others in solving tasks or problems.	2	33, 34

Validity of character assessment instruments by the experts

The following in Table 3 presented the validation results of three experts who assessed the self-assessment questionnaire of student character ownership.

Table 3. Validation Result of the Self-assessment Questionnaire of Student Character Ownership

Aspects of assessment	Value			Average
	Expert 1	Expert 2	Expert 3	
Linkage of indicators with characters to be developed	3.44	3.67	3.44	3.52
Correspondence of the questionnaire statement with the indicator measured	3.38	4.00	3.00	3.46
The language used is good and right	3.00	3.60	3.40	3.33
Average	3.27	3.76	3.28	3.44

Based on the validation results of the three experts, the self-assessment questionnaire of character ownership can be used with minor revisions.

The following in Table 4 presented the validation results of three experts who assessed the students' character observation sheets.

Table 4. Validation Results of the Students Character Observation Sheets.

Aspects of assessment	Value			Average
	Expert 1	Expert 2	Expert 3	
Linkage of indicators with characters to be developed	3.20	3.40	3.80	3.47
Correspondence of the questionnaire statement with the indicator measured	4.00	3.00	3.50	3.50
The language used is good and right	3.60	3.40	4.00	3,67
Average	3.60	3.27	3.77	3.55

Based on the result validation of the three experts, the student character observation sheet can be used with minor revisions.

Validity and reliability of character assessment instruments of the result field testing.

Field testing of the self-assessment questionnaire of student character ownership and student character observation sheet is intended to measure the empirical validity and reliability of the character questionnaire and observation sheet that the researcher has designed. The following in Table 5 is the result of calculating the empirical validity of the self-assessment questionnaire of student character ownership.

Table 5. The Empirical Validity of Self-assessment Questionnaire of Student Character Ownership

No	Character	Item number	r	Criteria
1.	Honesty	1	0,04	invalid
		2	0,38	valid
		3	0,46	valid
2.	Responsibility	4	0,54	valid
		5	0,65	valid
		6	0,45	valid
3.	Discipline	7	0,69	valid
		8	0,32	valid
		9	0,02	invalid
4.	Care	10	0,47	valid
		11	0,70	valid
		12	0,63	valid
5.	Politeness	13	0,71	valid

		14	0,47	valid
		15	0,70	valid
6.	Confidence	16	0,66	valid
		17	0,49	valid
		18	0,12	invalid
7.	Hard Work	19	0,71	valid
		20	0,61	valid
8.	Curiosity	21	0,41	valid
		22	0,58	valid
9.	Appreciative	23	0,51	valid
		24	0,39	valid
10.	Creative	25	0,44	valid
		26	0,37	valid
11.	Religious	27	0,74	valid
		28	0,58	valid
12.	Love motherland	29	0,66	valid
		30	0,58	valid
13.	Communicative	31	0,68	valid
		32	0,48	valid
14.	Independence	33	0,19	invalid
		34	0,43	valid

The empirical validity result of the self-assessment questionnaire of student character ownership in Table 5 shows that's from 34 statements there were 4 invalid questionnaires namely numbers 1, 9, 18, and 33. These invalid items were not used in subsequent studies to measure the effectiveness of learning, because the instrument to be used for research must meet valid criteria. Student character data collected from valid character measurement instruments will give a true description of student character. If the data collected do not provide a true description of the actual situation, the conclusions of the research results are also difficult to believe (Triyono, 2013). Therefore, good and high-quality instruments are needed in a study.

The (obtained r-value of) reliability test of the self-assessment questionnaire of student character ownership is 0.8926. This figure is above the value of r table, amounting to 0.2913 at a significance level of 5%. Thus, it fulfills aspects of instrument reliability. The following in Table 6 is the result of calculating the validity of the student character observation sheet.

Table 6. The Result Validity of the Student Character Observation Sheet

No	Cha	No item	r	Criteria
1.	Honesty	1	0.90	Valid
		2	0.68	Valid
		3	0.64	Valid
		4	0.71	Valid
		5	0.00	invalid
2.	Responsibility	1	0.85	Valid
		2	0.76	Valid
		3	0.86	Valid
		4	0.64	Valid
		5	0.30	invalid
3.	Discipline	1	0.73	Valid
		2	0.86	Valid
		3	0.74	Valid
		4	0.72	Valid
		5	0.86	Valid
4.	Care	1	0.67	Valid
		2	0.69	Valid
		3	0.66	Valid
		4	0.91	Valid
		5	0.72	Valid
5.	Politeness	1	0.66	Valid
		2	0.86	Valid
		3	0.73	Valid
		4	0.65	Valid
		5	0.67	Valid
6.	Confidence	1	0.86	Valid
		2	0.24	invalid
		3	0.66	Valid
		4	0.70	Valid
		5	0.66	Valid

The results of the validity calculation of the student character observation sheet in Table 6 show that from 30 statement items there are 3 invalid statement items namely number 5 on the honest character, number 2 on the responsible character, and number 2 on the confident character. This invalid item was not used in subsequent studies to measure the effectiveness of learning. The reliability test of the students' character observation sheets was obtained r-value of 0.9522. This figure is above the value of r table, amounting to 0.632 at the significance level of 5%. Thus, it fulfills aspects of instrument reliability.

CONCLUSION

Character assessment instruments need to be developed to measure the effectiveness of using innovative learning models to improve students' character. Instruments that can be used to measure student character must be tested valid and reliable. From the results of needs analysis and information gathering, to assess student character, researchers designed the self-assessment questionnaire of student character ownership filled in by students, and student character observation sheets filled in by the teacher.

The results of the validation by three experts show that the student's character assessment instrument was valid and could be used with minor revisions. The analysis of empirical validity in the self-assessment questionnaire of student character ownership showed that 30 items were valid statements, and 4 items were invalid statements. Analysis of empirical validity on the student character observation sheet shows that 26 items are valid statements, and 4 items are invalid statements. The reliability test of the self-assessment questionnaire of student's character ownership and student character observation sheets meet the reliable criteria.

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