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The Development of Measurement Instruments Of Students' Character Creativity

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ABSTRACT

The aim of study was to design and develop measurement instruments of students' character creativity. The method used is research and development with descriptive qualitative analysis. Stages in this study consisted of: the study of theory, instrument design, test experts qualitatively and quantitatively, pre empirical test to students at senior secondary level, and empirical test to students at senior secondary level. At the pre-trial stage of the empirical and empirical testing, testing the validity and reliability testing instruments. Of each stage of the test, namely: expert testing, pre-test of empirical, and empirical test will be repaired or revised so that the instruments developed qualify. The results of research and testing, it was concluded that: (1) measurement instrument character of students' creativity can be developed with 6 indicator consists of: no complacency on the results, attempt and try new things, have positive ideas and renewable, able to solve problems in different ways, have extensive knowledge and open and able to adapt to the development of the environment; (2) The results of the development of acquired instrument for measuring the character of the creativity of students in the form of self-assessment in the form of instruments of non-test assessment scale by using a measurement scale form of Likert scale with five possible answers are: always, often, sometimes, rarely, never as much as 30 items. The resulting measurement instrument comes with instructions for use and filling instructions.

Keywords: Development, Instrument, Character, Creativity.

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INTRUDUCTION

The character of a nation is essential possessed by every citizen. This is due to the character of the nation is the characteristic or distinguishing with other nations. Indonesia has a national character very well. Even been formulated by the Ministry of Education and Culture to 18 characters nation.

Character development is carried out through the education process. This is consistent with the statement in Act No. 20 of 2003 on National Education System Article 3 which states that "the National Education serves to develop the ability and shape the character of the character and civilization of dignity in the context of the intellectual life of the nation, aimed at developing students' potentials to become a man the faithful and devoted to God Almighty, noble, healthy, knowledgeable, capable, creative, independent, and become citizens of a democratic and responsible. "This means that through education expected every citizen, especially learners have values character well like: a creative and independent. By having the values of good character, then the identity of the learner will be good also.

In educational activities through the learning process carried out the application or development of character values of the nation. In the learning activities will be produced three (3) aspects, namely: cognitive, affective, and psychomotor.

Character Creativity

One aspect is the affective character of creativity. Muktahar (2001) states that "creativity is the ability to develop new ideas and to find new ways of looking at problems and opportunities." This means that creativity is an individual's ability to develop ideas or new ideas and implement them through new ways also in resolving a problem or opportunity in life. Meanwhile, according to Purnomo (2006) states that "creativity is the ability to create something new, whether it be the idea and the real work, either in the form of new works and in combination with things that already exist, that has never existed before." This means that the creativity of a person's ability to generate new either in the form of ideas or ideas and the real work by creating new or existing combine into a new one. It is supported by Munandar (2004) states that "creativity is essentially the general ability to create something new, as the ability to deliver new

ideas that can be applied in problem solving, or as the ability to see new relationships between elements that already exists." This means that creativity is a person's ability to produce a new in resolving a problem or linking things that already exist.

Affectiv aspects of attitude is related to psychology. So that in the assessment and measurement required a non-test instrument. Non-test instrument used in the measurement of these aspects so that the obtained data in the form of numbers or quantitative data. Zainul (2001) that "measurement is the process of giving numbers or numerical description of the extent of the effort the student has reached a level. Measurements related to the determination of a quantitative value." Thus, the measurement related to the determination of quantitative data. In the measurement activities required an instrument or a measuring instrument. Instruments used to be raw or valid. Broadly speaking, the instrument can be divided into two, namely the test and not test. Aiken cited Harsiati (2010) states "the classification of types of test are dichotomy, standardized tests and test non-standard"

The Present Study

Title of the study: The Development of Measurement Instruments of Students' Character Creativity

Objectives

The study was to design and develop measurement instruments of students' character creativity

PROCEDURE OF DEVELOPMENT OF MENSURATION INSTRUMENTS

In the development of non-test instrument consists of several steps the development of non-cognitive attributes measuring devices.

Phases I

- ❖ Development of specifications of measuring instruments

Phases II

- ❖ The writing a statement or question

Phases III

- ❖ The review of a statement or question

Phases IV

- ❖ The making instruments

Phases V

- ❖ Trials

Phases VI

- ❖ Analysis of the trial results

Phases VII

- ❖ selection and making the instruments

Phases VIII

- ❖ administrative instruments

Phases IX

- ❖ preparation of the scale and norms

Descriptive statistics

Descriptive statistics mainly mean, median, mode, standars deviation, cumulative percentage of distribution was computed and graphical Representation like ogives were employed to analyze the variabeles of the study.

FINDING AND DISCUSSION OF THE STUDY

Saparahayuningsih (2010) states that "some elements of creativity, namely: (1) have the knowledge that a flexible, able to bring different ideas and innovative; (2) has an open nature, always looking for, so it has a diverse and broad interest to the new; (3) free attitude, always wanted to create their own, not happy just follow someone else; (4) dressed confident on the capabilities it has always been strong-willed to try something, not easily discouraged and did not want to get involved with the boundaries are rigid." In addition, according Munandar (2004) states that" Creativity elements consist of: (1) make decisions and solve problems with sage; (2) apply knowledge, experience and skills to think more practice either within or outside the school; 3) generating idea or creation of creative and innovative; (4) addressing the ways of thinking in a hurry, vague, and narrow; (5) improve cognitive and affective aspects; (6) being open to receive and give opinions, make judgments based on reason and evidence, and dare to give views and criticism.

From some of the above concepts, instruments developed in the form of a grid. An initial draft in the form of a grid as in the table below:

Table 1. Early Instruments

No.	Componen	Indicator	Item	
			Positive	Negative
1	Creative Ability	Have a positive purpose	1, 2, 3	4, 5
		Has the ability to be creative and innovative thinking	6, 7, 8	9, 10
		Have extensive knowledge and open	11, 12, 13	14, 15
		Confident in his own abilities	16, 17, 18	19, 20
2	Creative Attitude	No complacency on the existing	21, 22, 23	24, 25
		Positive thinking at every problem as an opportunity	26, 27, 28	29, 30
		Produce concrete things new	31, 32, 33	34, 35
Item number			21	14

The instrument was developed through several stages of testing both the expert testing and empirical testing. It is intended that the instrument developed a standard instrument. According to Griffin cited Harsiati (2010) that "the instruments standard is an instrument which has the following characteristics: (1) prepared by the experts, the instrument is calibrated, analyzed, and corrected, (2) has guidelines and scoring clear, and (3) has a reference norm to interpret a score. Test or standard instrument refers to tests (instruments) that have had the identity of the test results and has the administrative instructions as well as the level of performance. The next stage is to test the expert or assessment by a team of experts. Results of the assessment team of experts such as in the table below:

Table 2. Summary of Qualitative Evaluation of Experts

Experts	Qualitative Evaluation
I	<ol style="list-style-type: none"> 1. The dimensions less appropriate to construct (important aspects have not elaborated on the grating). 2. Indicators not represent the construct. 3. The statement contains a context that does not fit. 4. Essential creativity needs to be included in the statement.
II	<ol style="list-style-type: none"> 1. The dimensions do not match construct. 2. Indicators many are not appropriate.
III	<ol style="list-style-type: none"> 1. Dimensions insufficient creativity creative concept. 2. The dimensions are less clear and less consistent with the concept of creativity

Based on the results of the assessment team of experts, the revision or improvement of the draft instrument in the form of a grid. The revised draft instrument as in the table below:

Table 3. Revision Instruments Test Results Experts

No.	Dimension	Indicator	Item	
			Positive	Negative
1	Dynamic	Not complacent about existing results	1, 2, 3	4, 5, 31
		Endeavor and try new things	6, 7, 8, 36	9, 10, 32, 39
2	Innovative	Have positive ideas and renewable	11, 12, 13	14, 15, 33
		Able to resolve the issue with various	16, 17, 18, 37	19, 20, 34, 40
3	Flexible and Open	Has extensive knowledge and open	21, 22, 23	24, 25, 35
		Able to adapt to the development of the environment	26, 27, 28, 38	29, 30
Item Number			18	17

The instrument has been repaired then conducted empirical pre-testing or trials limited to 62 high school students consisting of 3 high schools in Jakarta. Based on the results of testing the validity and reliability testing, obtained by instruments such as the table below:

Table 4. Test Results Instrument Limited

No.	Dimension	Indicator	Statement	
			Positive	Negative
1	Dynamic	Capable of introspection to a problem	1, 2, 3	4, 5
		Capable to put the responsibility for a problem.	6, 7, 8	9, 10
2	Innovative	Capable of mapping problems	11, 12, 13	14, 15
		Capable to analyze the origins of a problem	16, 17, 18	19, 20
3	Flexible and Open	Capable to perceive a problem	21, 22, 23	24, 25
		Capable to deal with a problem.	26, 27, 28	29, 30
Item Number			18	12

Besides tested by experts, the raw instruments that are developed should be tested to the respondent on the ground or students who have been determined. Aiken cited Harsiati (2010) states "then added that the test standard was prepared by expert measurements, which typically has been tested on group norms." In the trial instruments in the field or empirical testing, the samples used must meet requirement. That is the number of respondents field trials should be 10 times the number of grains being developed for testing. According Kerlinger cited Harsiati (2010: 54) that "a general recommendation number of samples 10 times more grain to be tested is then performed empirical testing or testing area to 446 high school students consisting of 18 high school in Jakarta, West Java, and Banten, Number of respondents extensive trials already qualified which is 10 times the number of grains being tested. Instrument testing results validity and reliability testing instrument to test large as in the table below:

Table 5. Test Results Instrument Size

No.	Dimension	Indicator	Item	
			Positive	Negative
1	Dynamic	Not complacent about existing results	1, 2, 3	4, 5
		Endeavor and try new things	6, 7, 8	9, 10
2	Innovative	Have positive ideas and renewable	11, 12, 13	14, 15
		Capable to resolve the issue with various	16, 17, 18	19, 20
3	Flexible and Open	Has extensive knowledge and open	21, 22, 23	24, 25
		Capable to adapt to the development of the environment	26, 27, 28	29, 30
Item Number			18	12

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