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Instrument construct of student's discipline attitude: Validity and reliability

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Abstract: The research aimed to develop an instrument for student discipline attitudes that is standard and feasible for use. The research was research and development. The subjects were 312 students of class XI at SMA Negeri 1 Karangdowo. Data collection was carried out by distributing questionnaires. Data analysis used Exploratory Factor Analysis for the validity test and Cronbach's Alpha for the reliability test. The research showed that (1) the assessment of discipline attitudes carried out by teachers has not used valid and reliable instruments. (2) The development of the instrument obtained indicators of discipline attitudes, which were divided into 3, obeying general school rules outside of KBM, obeying KBM rules and attendance in class, and obeying rules related to learning tasks. The construct validity test of 50 items was declared valid with a Cronbach's Alpha value of 0.898, which was divided into 15 factors. (3) The tendency for discipline attitudes of class XI students at SMA Negeri 1 Karangdowo was in the medium category.

Keywords: Discipline Attitude; Validity; Reliability; Instrument Construct

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INTRODUCTION

Today, Education is being developed to cover three domains, namely cognitive (knowledge), psychomotor (skills), and affective (attitude) (Rahman, 2020). These three domains of thinking are the basis for the student learning process and the assessment system (Explained by the Deputy Minister of Education, Education and Culture of the Republic of Indonesia, 2014). The implementation of education always relates to strengthening character education, which is included in the affective domain. According to Olatunji (2013), affective attitude learning is related to how students feel when they are learning and how learning experiences are internalized so that they can guide students' attitudes, opinions, and behavior in the future.

Davidson (2014) argues the goal of education by stating that The goal of character must be to develop in students an ethical conscience as well as an ethic of excellence. Dalmeri (2014); Lickona (2004) argue the concept of character education contains three main elements: knowing the good, desiring the good, and doing the good. Character education does not only teach students right and wrong, but it also builds good habits (habituation) so that students understand, feel, and are willing to do good. Then, character education carries the same mission as

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moral education. The implementation of education must be measurable and developed continuously with standard assessments.

The government has formulated some ideal comprehensive assessment criteria in carrying out a balanced assessment of the cognitive, psychomotor, and affective domains. This action is supported by Bloom et al. (1971), who states that there are three aspects of learning: cognitive, affective, and psychomotor. In Indonesia, teachers are generally only familiar with assessment instruments in the form of tests. Moreover, they assume that assessments only need to be performed after students have completed the learning process. Teachers still tend to be trapped in the dominance of knowledge domain assessments. As a result, they are not yet optimal in reaching attitude and skill competencies. The process and assessment of learning outcomes, as described, can impact the overall quality of education.

Assessments carried out by subject teachers are carried out in the cognitive and psychomotor domains only. Meanwhile, assessment in the affective (attitude) domain has not been carried out due to the instrument is considered difficult. There are too many affective assessment formats in the National Curriculum 2013 provided by the government, and teachers will lose teaching time if they have to carry out all the available effective assessments. The study interviewed subject teachers, Guidance Counseling (BK) teachers, and homeroom teachers at SMA Negeri 1 Karangdowo. The interviews showed that subject teachers, guidance and counseling teachers, and homeroom teachers at SMA Negeri 1 Karangdowo had not used affective assessment instruments. They found it difficult to create an instrument that was easy to use. Also, they realized that not using instruments to assess affective assessments could cause the assessment results to be non-objective. They usually only carry out affective assessments through observation (Mardapi & Setiawan, 2018). Observation activities are difficult to carry out because, apart from requiring a lot of time, they also require memorization and high accuracy in observing students. In line with Arifin (2015), some teachers currently carry out discipline assessments using observation without using assessment instruments.

Due to the lack of good instruments and teachers' difficulties in assessing affective abilities, the study tries to design and develop an affective assessment instrument. An affective assessment consists of spiritual and social attitudes (honesty, discipline, self-confidence, courtesy, tolerance, independence, and responsibility).

This particular research focuses on developing quality, disciplined attitude assessment instruments. Assessment of discipline attitudes aims to determine trends in students' discipline behavior, both in and outside of the classroom, as a result of education. Zubaedi (2011) defined discipline as actions that demonstrate orderly behavior and compliance with various rules and regulations. Discipline is a form of obedience to a set of written and unwritten rules (Moenir, 2010). The application of discipline shows the existence of strong encouragement and control for individuals in channeling their emotions and showing their behavior (McKinney et al., 2018). Discipline in the world of education is an attitude/behavior that is definitely expected by every educator so that learning activities, both in and outside the classroom, can run as well as expected. Discipline at school can be interpreted as a form of behavior that is obedient to the rules and regulations of the school. Disciplined students will help themselves to have an obedient and orderly personality. According to the Great Indonesian Dictionary (KBBI), discipline means obedience to regulations (rules and so on). This definition of discipline is described as indicators of discipline attitudes, namely, obeying general school rules outside of KBM; (2) obeying KBM rules and attendance in class; (3) obeying rules related to learning tasks.

Teachers can assess attitude competency through observation, self-assessment, peer-assessment, and journals. Observation, self-assessment, and peer assessment activities are

checklists or rating scales accompanied by rubrics. Meanwhile, journals are an educator notes (Sani, 2014). A rating scale is a non-test measurement tool that uses a structured procedure to obtain information about an observing thing, which states the position of something concerning other people (Siregar & Nara, 2010). The research aims to develop an assessment instrument for students' discipline attitudes that is standard and feasible for use, including (a) appropriate indicators to be used to measure students' discipline attitudes, (b) developing indicators for assessing discipline attitudes into questionnaire items; and (c) knowing the validity and reliability of the instrument for assessing students' discipline attitudes. Ultimately, it is used to determine high school students' discipline attitudes.

METHODS

The research method used a non-test assessment instrument development model using procedures suggested by Mardapi (2018), namely determining instrument specifications, writing the instrument, determining the instrument scale, determining the scoring system, reviewing the instrument, reassembling the instrument, conducting trials, analyzing the instrument, carrying out measurements, and interpreting measurement results. Instrument development begins with conducting initial research, compiling an initial model/hypothetical model, developing the model, and implementing the instrument.

Content validity is performed by involving experts to review the developing instrument. Validation of discipline attitude assessment instruments consisted of the aspects of material, construction, language, and aspects of the relevance of the statement items. The expert agreement index on the item relevance was calculated using Aiken's V Formula.

Content validity is calculated using the Aikens V coefficient (Aiken, 1985; Fajaruddin et al., 2021). It is used to calculate the content validity coefficient based on the results of the assessment of n experts on an item in terms of the item representing the measured construct. Assessment is carried out by giving 1 (not relevant) to 5 (very relevant). The formula was as follows:

$$V = \frac{\sum s}{n(c-1)} \quad \text{..... [1]}$$

(Aiken, 1980, 1985; Kumaidi, 2014; Retnawati, 2016)

The equation for Formula 1 shows that s is the score determined by the expert minus the lowest score in the category used (r- l_0), and c is the number of categories that can be selected by the expert (Retnawati, 2016). Formula 1 is used to categorize the results of the raters' calculations with the expert agreement index. If the agreement index is less than 0.4, it has a low validity. When the score is between 0.4 - 0.8, it is a medium validity. And if the score is more than 0.8, it is high (Retnawati, 2016).

The limited trial or readability test was an assessment instrument for students' discipline attitudes distributed to ten students, which was randomly taken in each class XI of SMA Negeri 1 Karangdowo. The focus of this stage is that students read the sentences of the questionnaire items. Then, students are asked to identify the difficult words and sentences, sentences that are too long and difficult to understand, and unclear things.

The extensive trial involved 312 SMA Negeri 1 Karangdowo students from ten different XI classes. Trials aim to see the feasibility of the instrument construct that had been created and had been reviewed by experts. Students' responses in extensive tests will be analyzed to test the validity and reliability of the instrument. The validity test used Exploratory Factor Analysis (EFA). The reliability test used Cronbach's alpha with the help of SPSS 26 software.

RESULTS AND DISCUSSION

Result

Before developing the student discipline attitude instrument, data was collected on the assessment of student discipline attitudes at SMA Negeri 1 Karangdowo. Data collection was carried out by interviews and written opinions from 6 teachers as a represented sample of teachers at SMA Negeri 1 Karangdowo. Based on the interviews and written opinions, teachers have not correctly assessed students' discipline attitudes. Teachers assess students' discipline attitudes only by observing the student's behavior. The behavior observed used as a reference for discipline attitudes also varies because there are no standard guidelines for assessing discipline attitudes, neither from the government nor schools, that teachers at SMA Negeri 1 Karangdowo can use.

Based on the interviews and the conditions at SMA Negeri 1 Karangdowo, a tool or instrument is needed to assess students' discipline attitudes. The hope is that with a standard student discipline attitude instrument, teachers will have guidelines for assessing student discipline attitudes.

Process of Developing Assessment Instruments for Student Discipline Attitudes.

Initial Models

The initial stage of developing an assessment instrument is completed by compiling a guideline based on concepts, indicators, coding valence, factual data, both positive and negative, and total items. In developing this assessment instrument, there are 3 (three) indicators of student discipline attitudes, namely: obeying general school rules outside of KBM; (2) obeying KBM rules and attendance in class; (3) obeying rules related to learning tasks. These indicators were then developed into a guideline of assessment instruments for assessing students' discipline attitudes, consisting of 30 valence items and 30 factual items, presented in Table 1.

Table 1. Guidelines for Initial Models

Indicators	Data of Valence		Factual Data		Total
	Positive	Negative	Positive	Negative	
Obeying general school rules outside of KBM	V1.1	V1.2	F1.1	F1.2	4
	V2.1	V2.2	F2.1	F2.2	4
	V3.1	V3.2	F3.1	F3.2	4
	V4.1	V4.2	F4.1	F4.2	4
	V5.1	V5.2	F5.1	F5.2	4
	V6.1	V6.2	F6.1	F6.2	4
Obeying KBM rules and attendance in class	V7.1	V7.2	F7.1	F7.2	4
	V8.1	V8.2	F8.1	F8.2	4
	V9.1	V9.2	F9.1	F9.2	4
	V10.1	V10.2	F10.1	F10.2	4
	V11.1	V11.2	F11.1	F11.2	4
Obeying rules related to learning tasks	V12.1	V12.2	F12.1	F12.2	4
	V13.1	V13.2	F13.1	F13.2	4
	V14.1	V14.2	F14.1	F14.2	4
	V15.1	V15.2	F15.1	F15.2	4
Total	30		30		60

The instrument guidelines are distributed to experts to review from various aspects, such as language, writing system, etc. Quantitatively, the results of expert validation involving six validators stated that the guideline was valid with a V value of more than 0.4 for each indicator.

Qualitatively, the experts provided input (theoretical Expert Judgment), which was written in the validation sheet with the conclusion that: (1) The developed instrument followed the indicators; (2) There are sentences of indicator that need to be corrected; (3) There are several instrument items that are not yet focused and are still confusing; (4) Need to consider to the language used; (5) There are several words that need to be corrected so that the statement is easy to understand for students; (6) Consistent in word use.

Table 2. Validation Results of *Expert Judgement*

Before validation	After validation
Obey school rules or regulations.	Obey school rules and general rules outside of KBM.
Arrive on time	Obey the rules and regulations of learning at school.
Complete/collect assignments within the specified time.	Comply with the rules and regulations related to learning assignments.
I wear my school uniform following the schedule.	I wear my school uniform following the schedule.
Students like to wear a modified school uniform to be cool-looking	Students violate uniform regulations by modifying them.
Students are reluctant to take part in the flag ceremony because it is hot.	Students are reluctant to take part in the flag ceremony for various reasons.
I attended the ceremony in an orderly manner.	I attended the ceremony in an orderly manner.
I return books to the library according to the time stated by the library staff beforehand.	I return books to the library according to the regulations.
Students are required to attend school every day (except holidays).	Students are required to attend school every day according to school hours.
Students copy the work of other students when they have not done the work/assignment.	Students copy the work of other students when they have not done the work/assignment.

Based on the material and construction aspects concerning the feasibility between the indicators and the developing instruments, the results were 95.83%. The language aspect, seen from the feasibility of the language use and the language rules, obtained a result of 91.67%. The effectiveness of the language was 91.67%. From the easy-to-understand language, the result was 95.83%. The average results of expert assessments related to material, construction, and language aspects obtained a score of 93.75%. Based on the expert assessment agreement for material, construction, and language aspects, the results are presented in Table 3.

Table 3. Expert Assessment Results for Material, Construction, and Language Aspects

Component of Assessment	Aspects	Indicators	Score of Validators						v Value
			V1	V2	V3	V4	V5	V6	
Aspect of material and construction	Relevance	Conformity of indicators with the developing instruments	4	3	4	4	4	4	3.83
Aspect of language	Language accuracy	The language follows the Indonesian language rules	3	4	4	3	4	4	3.67
		The language is effective	3	3	4	4	4	4	3.67
		The language is easy to understand	4	4	4	3	4	4	3.83
		Average	3.5	3,5	4	3,5	4	4	3.75

The results provided by the expert validity test were obtained using the content validity index (Aiken Index). The expert agreement index concerning the item relevance was calculated using the V_{aiken} Formula. The results of the content validation test are valid if they meet Aiken's V coefficient limit. The boundary condition for Aiken's V coefficient for 4 rating scales and 6 raters is 0.78. Each item on the instrument is valid in the medium and high categories.

The instrument guideline has been validated and valid. Then, it continued to the trial step. Extensive trials of student discipline attitude instruments were carried out at SMA Negeri 1 Karangdowo involving 312 students of class XI from 10 different classes.

Reliability Test

A reliability test was employed using SPSS and Reliability Analysis Statistics with Cronbach Alpha (α). If the Cronbach Alpha (α) value is> 0.60, then the variable is reliable (Nunnally, 1978). The higher the reliability coefficient, the closer it is to 1, the more reliable it is. The results of the instrument's reliability test are presented in Table 4.

Table 4. Reliability Coefficient

Reliability Statistics	
Cronbach's Alpha	N of Items
0.898	50

Table 4 shows that there are 50 items of the N of items with a Cronbach's Alpha value of 0.898 > 0.60. So, it concluded that all statement items are reliable.

Construct Validity Test

The construct validity test was carried out in the study on 312 students as respondents (N=312) on 50 variable items. The test of construct validity was through stages in factor analysis.

Correlation Matrix

In this development process, based on calculations from the Correlation Matrix, the output KMO and Bartlett's Test values for 50 valid and reliable statements are presented in Table 5.

Table 5. The value of KMO and Bartlett's test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.845
Bartlett's Test of Sphericity	Approx. Chi-Square	7884.449
	df	1225
	Sig.	0.000

The value of KMO and Bartlett's Test for correlation between variables is > 0.5 with a significance of < 0.05. Based on the analysis, the KMO value is 0.845, which means > 0.5. Meanwhile, the significance of Bartlett's Test of Sphericity is 0.000, which means < 0.05. Based on the analysis, the variables and samples are allowed to be used for further analysis.

Then, to see the correlation between independent variables, it can be obtained from the Anti-Images Matrices table with an MSA (Measure of Sampling Adequacy) value ranging from 0 to 1 with the following conditions: (1) MSA = 1, the variable can be predicted without error by other variables; (2) MSA > 0.5, variables can still be predicted and analyzed further using factor analysis; (3) MSA < 0.5 or close to 0, the variable cannot be predicted and cannot be analyzed further so it must be excluded/dropped (Santoso, 2015).

The correlation matrix test shows an Anti-Image Covariance and Anti-Image Correlation. Considering the Anti-Image Correlation row with marked a, the correlation matrix test results in Table 6 can be interpreted.

Table 6. MSA Value

Item	MSA	Description
ITEM1	0.803	Further analyzed
ITEM2	0.571	Further analyzed
ITEM3	0.927	Further analyzed
ITEM4	0.680	Further analyzed
ITEM5	0.938	Further analyzed
ITEM6	0.874	Further analyzed
ITEM7	0.895	Further analyzed
ITEM8	0.879	Further analyzed
ITEM9	0.801	Further analyzed
ITEM10	0.878	Further analyzed
ITEM11	0.824	Further analyzed
ITEM12	0.829	Further analyzed
ITEM13	0.938	Further analyzed
ITEM14	0.925	Further analyzed
ITEM15	0.940	Further analyzed
ITEM16	0.900	Further analyzed
ITEM17	0.915	Further analyzed
ITEM18	0.918	Further analyzed
ITEM19	0.939	Further analyzed
ITEM20	0.755	Further analyzed
ITEM21	0.942	Further analyzed
ITEM22	0.918	Further analyzed
ITEM23	0.924	Further analyzed
ITEM24	0.832	Further analyzed
ITEM25	0.580	Further analyzed
ITEM26	0.890	Further analyzed
ITEM27	0.937	Further analyzed
ITEM28	0.865	Further analyzed
ITEM29	0.933	Further analyzed
ITEM30	0.879	Further analyzed
ITEM32	0.774	Further analyzed
ITEM35	0.779	Further analyzed
ITEM36	0.765	Further analyzed
ITEM37	0.751	Further analyzed
ITEM38	0.722	Further analyzed
ITEM40	0.741	Further analyzed
ITEM41	0.719	Further analyzed
ITEM45	0.582	Further analyzed
ITEM47	0.697	Further analyzed
ITEM48	0.808	Further analyzed
ITEM50	0.735	Further analyzed
ITEM51	0.800	Further analyzed
ITEM53	0.838	Further analyzed
ITEM54	0.818	Further analyzed
ITEM55	0.778	Further analyzed
ITEM56	0.800	Further analyzed
ITEM57	0.835	Further analyzed
ITEM58	0.774	Further analyzed
ITEM59	0.769	Further analyzed
ITEM60	0.745	Further analyzed

Communalities

Based on the Communalities output, the item's size strongly correlates with the factors formed if it has a value > 0.5. The correlation score is presented in Table 7.

Table 7. Percentage of Factors Explaining Item Variance

Item	Extraction	% correlation
ITEM1	0.898	89.8
ITEM2	0.698	69.8
ITEM3	0.655	65.5
ITEM4	0.737	73.7
ITEM5	0.605	60.5
ITEM6	0.606	60.6
ITEM7	0.592	59.2
ITEM8	0.634	63.4
ITEM9	0.589	58.9
ITEM10	0.710	71.0
ITEM11	0.861	86.1
ITEM12	0.598	59.8
ITEM13	0.623	62.3
ITEM14	0.576	57.6
ITEM15	0.648	64.8
ITEM16	0.515	51.5
ITEM17	0.551	55.1
ITEM18	0.625	62.5
ITEM19	0.676	67.6
ITEM20	0.865	86.5
ITEM21	0.627	62.7
ITEM22	0.715	71.5
ITEM23	0.547	54.7
ITEM24	0.659	65.9
ITEM25	0.939	93.9
ITEM26	0.621	62.1
ITEM27	0.636	63.6
ITEM28	0.680	68.0
ITEM29	0.605	60.5
ITEM30	0.690	69.0
ITEM32	0.659	65.9
ITEM35	0.561	56.1
ITEM36	0.659	65.9
ITEM37	0.737	73.7
ITEM38	0.709	70.9
ITEM40	0.849	84.9
ITEM41	0.565	56.5
ITEM45	0.937	93.7
ITEM47	0.662	66.2
ITEM48	0.640	64.0
ITEM50	0.659	65.9
ITEM51	0.830	83.0
ITEM53	0.567	56.7
ITEM54	0.556	55.6
ITEM55	0.887	88.7
ITEM56	0.581	58.1
ITEM57	0.567	56.7
ITEM58	0.676	67.6
ITEM59	0.579	57.9
ITEM60	0.645	64.5

Eigenvalues

This development formed 15 factors and 15 variances. The requirement to become a factor is that the Eigenvalues must be ≥ 1. The amount of variance can be explained by factors 1-15 and presented in Table 8.

Table 8. Value of *Eigenvalues*

No.	Factor	Total Extraction	N	% Variance
1.	1	11.154	50	22.308
2.	2	3.501	50	7.002
3.	3	2.510	50	5.021
4.	4	2.157	50	4.314
5.	5	1.769	50	3.537
6.	6	1.599	50	3.198
7.	7	1.519	50	3.037
8.	8	1.405	50	2.809
9.	9	1.292	50	2.585
10.	10	1.187	50	2.374
11.	11	1.156	50	2.313
12.	12	1.148	50	2.295
13.	13	1.074	50	2.147
14.	14	1.026	50	2.053
15.	15	1.007	50	2.014
			Total	67.008

A total of 15 factors can explain 67.008% of the variables. Because the cumulative figure is > 60%, the formation of factors in this development is adequate. Construct validation was empirically used in this development using Confirmatory Factor Analysis (CFA).

Scree Plot

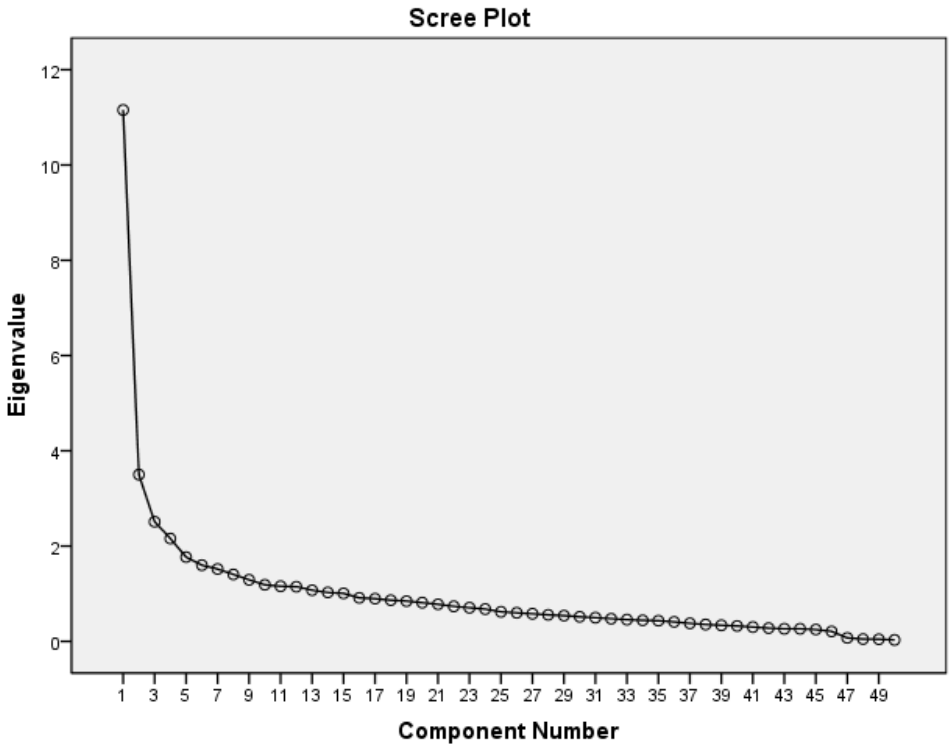

Figure 1. *Scree Plot*

Figure 1 shows one component is formed, but the curve still shows steepness. Also, at the 2nd point, the curve line is still sharp. At the 3rd point, the curve line is slightly sharp but slightly different from the pattern of the two previous lines. After passing the 4th point, the curve line starts to slope. The further it goes to the right, the steeper it becomes. This shows that some factors are acceptable.

Loading Factor

The Rotated Component Matrix formed 15 factors. Next, the largest correlation value in the Rotated Component Matrix is used to determine whether each independent variable will be included in a factor. The largest correlation indicates that the variable is more feasible to include in the Component Matrix. The analysis shows that after rotation, all items have factor loadings.

Naming of Factor

Based on the Rotated Component Matrix table, each independent variable is included in a factor with a name, as presented in Table 9.

Table 9. Naming of Loading Factor Distribution

Factor	Distribution of Test Items	Naming of Factor
1.	3, 5, 6, 7, 8, 9, 11, 13, 14, 15, 17, 18, 19, 21, 22, 23, 27, 29, 51	Obey the KBM (Teaching and Learning) schedule.
2.	16, 20, 40, 50	Leaving the school Environment.
3.	24, 26, 28, 56	Tasks are completed in my free time
4.	25, 45	Arrived at school before the bell rings
5.	54, 58, 60	Reasons for not completing school assignments.
6.	2, 4	Modification of uniforms.
7.	1, 55	Assignments are completed the day before they are submitted.
8.	48, 53, 57	They are still in the canteen when break time is over
9.	35, 41	Attending the flag ceremony.
10.	37, 38	Late in joining extracurriculars.
11.	47, 59	Request a letter of permission to enter class.
12.	30	Sanctions or punishment for not doing schoolwork
13.	12, 32	Wear uniforms neatly and properly
14.	36	Ensconce during the flag ceremony
15.	10	Leaving the school environment.

Results of Measuring Student Discipline Attitudes

Descriptive data includes mean (M), mode (Mo), median (Me), and standard deviation (SD). The mean is the average score. Meanwhile, the mode is the data's value with the highest frequency. The median is the middle value of the data sorted from the smallest to the largest data. And standard deviation is a standard measure of deviation from the mean.

Data of research variable needs to be categorized using steps according to Arikunto (2010): (1) In the High group, all respondents have a score equal to the mean score plus 1 of the class standard deviation (X $\geq M_i + 1\ SD_I$); (2) Medium group, all respondents have a score between the mean score minus 1 standard deviation and the mean score plus 1 standard deviation ($M_i - 1SD_i \leq X < M_i + 1SD_i$); (3) Low group, all respondents have a score lower than the mean score minus 1 standard deviation (X $< M_i - 1\ SD_i$).

The ideal mean price (M_i and ideal standard deviation (SD_i) are obtained using the formula: (1) Ideal mean (M_i) $= \frac{1}{2}$ (highest score + lowest score); (2) Ideal standard deviation (SD_i) $= \frac{1}{6}$ (highest score-lowest score). The statistical description of the discipline attitudes implementation is presented in Table 10.

Table 10. Statistical Description of the Implementation of Discipline Attitudes

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
TOTAL_SCORE	312	141	200	164.83	12.878
Valid N (listwise)	312				

The assessment instrument for student discipline attitudes is divided into three categories. Categorization criteria are presented in Table 11.

Table 11. Criteria of Categorization

Criteria	Category
Low	$X < M_i - 1\ SD_i$
Medium	$M_i - 1SD_i \leq X < M_i + 1SD_i$
High	$X \geq M_i + 1\ SD_I$

Then, it obtained the category for each discipline attitude value, presented in Table 12.

Table 12. Discipline Value Categories

Total Score	Category of Value
X < 152	Low
152 <= X < 178	Medium
178 <= X	High

The Table 12 shows the value of the assessment of students' discipline attitudes. First, most students, or 70% of respondents, were in the Medium category. 13% of the 312 student respondents were in the Low category. And 17% were in the High category.

Discussion

The assessment instrument for students' discipline attitudes is prepared based on three indicators outlined in a guideline. Based on the guideline, an assessment instrument for students' discipline attitudes was created in the form of a questionnaire with 60 statement items consisting of 30 valence items (attitudes) and 30 factual items (behavior), consisting of 15 positive items and 15 negative items, respectively.

The instrument scale used a Likert scale with four alternative answers and a score of 1 to 4. Six expert judgments validated the instrument. They are one expert in the instrument development aspect, one in the material development aspect, two in the material aspect, and two in the Language aspect. The validated instruments by expert judgment are then revised. After it was revised and declared feasible for testing, it was continued with a limited trial (readability) by ten students of class XI at SMA Negeri 1 Karangdowo. Then, improvements were made to the assessment instrument of discipline attitude based on input from the limited trials (readability). After improvements, extensive trials were carried out on 312 students of class XI at SMA Negeri 1 Karangdowo. It is followed by validation and reliability tests to produce valid items with the Pearson Correlation number r ≥ 0.25. Of the 30 valence items, 30 items were valid. Of the 30 factual items, 20 items were valid. An item reliability test was carried out on 50 valid items using the Cronbach Alpha number ≥ 0.6. The results showed a Cronbach's Alpha value of 0.898 > 0.60. So, the 50 statement items are reliable.

The items represent all the measured indicators based on the content validity test. Indicators of obeying general school rules outside of KBM are represented by valence items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and factual items 32, 35, 36, 37, 38, 40, 41. Indicators of obeying teaching and learning rules and class attendance are represented by valence items 13, 14, 15, 16, 17, 18, 19, 20, 21, 22 and factual items 45, 47, 48, 50, 51. Indicators of obeying rules related to learning tasks are represented by valence items 23, 24, 25, 26, 27, 28, 29, 30 and factual items 53, 54, 55, 56, 57, 58, 59, and 60. Thus, the content validation test has been fulfilled. Namely, the items include all indicators of discipline attitudes that developed based on a guideline.

Concurrent validity test aims to determine the consistency between attitudes and behavior in the development of assessment instruments of discipline attitude that there is consistency between attitudes and behavior. Then, an extensive trial was carried out by testing construct validity with factor analysis on 312 students (N=312) on 50 valid and reliable items, including 30 valence items and 20 factual items. The KMO and Bartlett's Test value for the correlation between the desired variables is > 0.5 with a significance of < 0.05. From the analysis, the KMO value is 0.845, which means > 0.5, and the significance of Bartlett's Test of Sphericity is 0.000, which means < 0.05. The analysis showed that the variables and samples allow for further analysis. The first test showed that 50 statement items had MSA > 0.5. All MSA values concerning the Anti-image Correlation diagonal row are marked with the letter ^{a} > 0,5. Communalities data shows the value (%) of the formed factors can explain the item variance. An item has a strong correlation with the formed factors if it has a value > 0.5.

The 50 items of the assessment instrument for students' discipline attitudes have a value of > 0.5. The Eigenvalues are seen from the table of Total Variance Explained. Initial Eigenvalues show the formed factors, while Extraction Sums of Squared Loadings show the number of variants. In developing this assessment instrument of discipline attitude, 15 factors and 15 variants were formed. A total of 15 factors can explain the variable by 67.008%. Because the cumulative value is > 60%, the form factors in this development are adequate. The scree plot form is used to determine the number of form factors. Loading Factor on the Rotated Component Matrix shows that all items have loadings factor. Factor 1 contains 19 items; factors 2 and 3 contain 4 items; factors 5 and 8 contain 3 items; factors 4, 6, 7, 9, 10, 11, and 13 contain 2 items of each, and factors 12, 14, and 15 contains 1 item of each. The analysis results after rotation showed that all items had a loading factor where 50 items of the assessment instrument for students' discipline attitudes were spread across 15 factors, and each was given a naming factor.

Based on the research, the mean is 164.8 for the discipline attitude value of students of class XI at SMA Negeri 1 Karangdowo, totaling 312 students. The mean is between 152 and 178, which means the discipline attitude value of students of class XI at SMA Negeri 1 Karangdowo is in the Medium category.

Schools must work together with parents. The role of parents is very important in building character values, especially discipline. This statement is supported by the opinion of Chen and Gregory (2009) that parental involvement in students' education will have several positive influences, as shown by indicators, including positive student behavior, higher student grades, consistent school attendance, and fewer discipline problems.

CONCLUSION

Based on the findings and discussion, it concluded that (1) Measuring the discipline attitude values of students at SMA Negeri 1 Karangdowo has not used standard instruments but only used observations; (2) The development of the assessment instrument for students' discipline

attitudes obtained a final instrument with three indicators consisting of 50 items, namely 30 factual items and 20 valence items. The instrument has been developed through expert validity tests, readability tests, item validity tests, content validity, concurrent validity, and reliability tests. Of the 50 valid items, an item reliability test was carried out using the Cronbach Alpha number ≥ 0.6. The reliability test obtained a Cronbach's Alpha figure of 0.898 > 0.60, so the 50 statement items are reliable; (3) The factor analysis shows that all items have a loading factor where the 50 items of the assessment instrument for students' discipline attitudes are spread across 15 factors; (4) The level of discipline of class XI students at SMA Negeri 1 Karangdowo is in the medium category. The level of student discipline still needs to be improved.

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