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Implementing Rasch Model as an Approach to Test Academic Integrity Instrument's Validity and Reliability

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ABSTRACT

This research was conducted to analyze the validity of the academic integrity instrument for senior high school (SMA) students in Bandung. The academic integrity instrument consists of 45 items which contain five aspects of academic integrity: honesty, trust, fairness, respect and responsibility. The research sample was 80 high school students randomly distributed in 3 classes in Bandung. This study used a quantitative approach and descriptive method with a survey as the research method design. Data were analyzed with the Rasch model using the Winstep application version 3.73. The results of the analysis found that: 1) The interaction between respondents and items is included in the good category; 2) The reliability value of the respondent which shows the consistency of the respondent in filling out the instrument is included in the good and acceptable category; 3) The reliability of the item items as an indicator of the quality of the item items in the instrument belongs to the special category; 4) The average difficulty level of standard items is above the ability level of high school students. Thus the items of the academic integrity instrument are easily approved by high school students in Bandung.

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1. INTRODUCTION

Academic integrity is defined as the embodiment of honest, fair, responsible and respectful behavior in the academic environment. In line with that the concept of academic integrity according to Gill (2013) is as an act or principle consisting of the values of honesty, trust, respect, fairness and basic responsibility for the reputation of an academic institution. Agreeing with that, Tauginienė et al (2018) describe the concept of academic integrity as adherence to ethical and professional principles, standards and practices by individuals or institutions in education, research and scholarship. Education plays an important role in improving the quality of human resources in thinking and behaving. Education has a role in developing aspects of a person, namely: cognitive, affective, and psychomotor (Fluerentin, 2012; Munawaroh, 2019; Tambak, 2017). Academic integrity needs to be upheld by a group of people who are in an academic environment with the aim of developing culture and improving academic quality (Firmantyo & Alsa, 2016; Ma'ruf & Saputera, 2019).

Humans in their existence have various aspects of life, such as aspects of individuality, sociality, culture, morality and religion. Aspects of morality have an interest in increasing noble character and moral values from within students and all educational practitioners (Chowdhury, 2018; Firmantyo & Alsa 2016). Students who carry out acts of academic integrity correctly will get a feeling of pride and these students have met the highest moral standards in academic activities (Fitria, 2019; Rofi'ie, 2019). Conversely, students who are used to committing violations of academic integrity will find it very difficult to leave them (Bariyah, 2021; Hafizha, 2021). Based on research conducted Park & Jang (2013) at South Korean nursing colleges, forms of violations of academic integrity that are often found in academic settings are cheating during exams and cheating while doing assignments.

The act of violating the academic integrity committed by students is of course carried out based on a deliberate background. The emergence of behavior that violates academic integrity according to Faucher & Caves (2009) is caused by competition to get a higher average grade, pressure for perfection of values, sensation of behavior not being caught, desire to succeed no matter how, lack of skills in the organization, acceptance cheating aid in class, psychological rationalization to justify actions.

Violation of academic integrity is a problem that is quite troubling in the field of education. Academic cheating in Indonesia has long been commonplace. According to the results of a 2015 survey conducted by the Little Circle Foundation in 2015, it indicated that more than 92% of Udayana University students had cheated on exams. This proves that violations of academic integrity are commonplace (Hafizha, 2021; Kristanto et al., 2020; Rohmanu, 2016).

Based on the results of research conducted by Ramdani (2018) using the concept of academic integrity which consists of five aspects, this research produces an academic integrity scale that has a high reliability coefficient. This version of the scale illustrates the robustness of its psychometric properties because it is designed and built based on strong criteria and procedurally meets the requirements for use in future studies.

Another study conducted by Bashir & Bala (2018) regarding academic integrity related to Academic Dishonesty shows the results that the internal consistency index of the alpha coefficient shows at 0.831 which means it is adequate for the academic dishonesty scale. The results of this study confirm the multidimensional and strong psychometric properties of the academic dishonesty scale.

The Classical Test Theory (CTT) approach in measuring psychological studies is still being developed. Most of the psychological measurement tools so far have been developed using the CTT approach (Asdar & Afriadi, 2022). Classical Test Theory (CTT) was found to be a

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measurement tool for theory for more than 80 years. However, measurements based on CTT in that they measure a construct are carried out by applying arithmetic operations to scores obtained from item scores. This is less relevant because if an item produces a score, the score will be ordinal. Thus, these items cannot be treated as integers (Wibisono, 2016).

In developing measurement tools, the Rasch Model is a response to the various weaknesses of the CTT paradigm (Sumintono & Widhiarso, 2013). The difference between CTT when compared to the Rasch Model is in the raw score for the analysis process. In CTT, the raw score is in the form of a rank and is directly analyzed and treated like data that has integer characters. Whereas in the Rasch Model the data can be transformed by logarithms into logit units as the probability of respondents in a logit item needs to be converted first into the odds ratio (Wibisono, 2016). The Rasch model has the principle that interval level measurements can be lowered when the level of some attributes increases along with the increase in the values of the other two attributes (Bond & Fox, 2015; Medvedev & Krägeloh 2022).

The Rasch Model can be used as a method for returning data according to natural conditions because the Rasch Model refers to the basic characteristics of quantitative data. The Rasch model in analyzing the instrument to measure its validity can be said to be better because of its consistency (Jusoh, 2018; Saidi & Siew, 2019). Based on the results of research conducted by Asdar & Afriadi (2022) stated that there is no standard instrument that can be used to measure academic integrity instruments through the Rasch Model analysis. Generally, researchers develop instruments using a classical test theory approach. Measurement instruments developed using classical test theory need to be re-validated. This is a consequence of the dependence of measurement instruments. The advantage in using the Rasch model is that it can analyze data so that it can explain item statements and persons (Carvalho et al., 2012; Planinic et al., 2019). This problem can be overcome by using the Rasch Model because the difficulty level of the items remains invariant involved in the initial validation. This causes the Rasch Model to be more recommended for use in the development of test instruments.

To get accurate survey results, a valid instrument is needed. In this study the instrument can be said to be valid if it has been tested for validity and reliability. Therefore, this study will explain further about the results of validity and reliability tests of academic integrity instruments.

2. METHODOLOGY

This study used a quantitative approach and a cross-sectional survey research design. The subjects of this study were high school students at one of the high schools in the city of Bandung who were randomly selected using a random sampling technique. The instrument used is an academic integrity instrument that aims to measure the academic integrity of individuals in class X or equivalent to individuals at the age of 15-16 years. This instrument was developed based on aspects of the theory of academic integrity put forward by McCabe (2005) which were further studied by the International Center for Academic Integrity. These aspects include, honesty, trust, fairness, respect, and responsibility.

The data obtained is raw data that is directly collected from research respondents. The academic integrity instrument developed using a modified Likert scale was used to collect data regarding academic integrity. The instrument developed is an academic integrity instrument which consists of statement items with each statement item equipped with four alternative choices, namely: Not Appropriate, Less Appropriate, Appropriate, and Very Appropriate .

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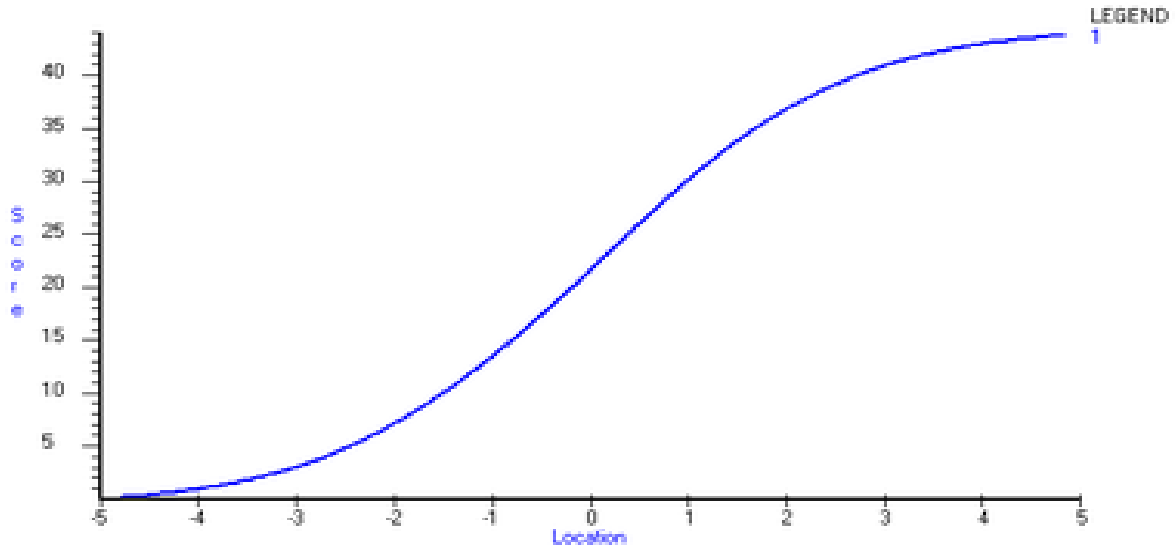

Figure 1. Rasch Model Analysis

In this study the data analysis technique used was the Rasch Model by measuring the unidimensionality of the instrument to assess whether the developed instrument was appropriate based on the suitability of standard indicators so that the instrument could be used. As well as analysis of the items by analyzing the level of difficulty of the items, the suitability of the items, the diagnostic rating scale, and the bias of the items. The instrument was analyzed as a whole to determine validity, reliability and separability.

3. RESULT AND DISCUSSION

3.1. Undimentionality

Undimentionality analysis identifies several attributes or dimensions that are measured by the instrument. This analysis uses the output of table 23 on the winstep application version 3.73 by observing the raw variance explained by measures and unexplained variance in 1st to 5st contrast. Undimentionality has a function to measure whether the developed instrument is in accordance with what it should measure (Ardiyanti, 2016; Clark & Watson, 2019). In this case the instrument to be measured is the academic integrity instrument.

If the raw variance explained by measures is more than 20% of the general criteria record, then the undimentionality measurement can be proven. With a note that the general criteria for interpretation, namely 20% -40%, are included in the sufficient category. 40-60% is included in the good category. If above 60% is included in the very good category. And the unexplained variance in 1st to 5th contrast of residuals is <15% each.

Table 1. Undimensionality of Academic Integrity

No	Information	Score 1	Score 2	Score 3	Score 4
1	Total raw variance in observations	82.04.00	100.0%		100.0%
2	Raw variance explained by measures	37.04.00	45.4%		45.5%
3	Raw variance explained by persons	07.05	9.1%		9.1%

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No	Information	Score 1	Score 2	Score 3	Score 4
4	Raw Variance explained by items	29.09.00	36.3%		36.4%
5	Raw unexplained variance (total)	45.00.00	54.6%	100.0%	54.5%
6	Unexplned variance in 1st contrast	08.05	10.4%	19.0%	
7	Unexplned variance in 2nd contrast	04.00	4.8%	8.9%	
8	Unexplned variance in 3rd contrast	03.01	3.8%	6.9%	
9	Unexplned variance in 4th contrast	02.05	3.0%	5.5%	
10	Unexplned variance in 5th contrast	02.02	2.7%	4.9%	

Based on table 23, the raw variance explained by measures 45.4% is included in the good category. While the unexplained variance in 1st to 5th contrast of residual respectively is unexplained variance in 1st contrast of 10.4%, unexplained variance in 2nd contrast of 4.8%, unexplained variance in 3rd contrast of 3.8%, unexplained variance in 4th contrast of 23.0%, and unexplained variance in 5th contrast of 2.7%.

3.2. Item Analysis

The analysis of this item includes the level of difficulty (item measure), the level of suitability of the item (item fit) and the detection of item bias.

Table 2. Conformity Level of Item Items

ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT		OUTFIT		PT-ME ASURE		EXACT	MATCH	Item
					MNSQ	ZSTD	MNSQ	ZSTD	CORR.	EXP.	OBS%	EXP%	
18	124	84	02.28	00.17	01.54	02.08	0,185	08.05	-0.03	00.32	50	58	18
19	134	84	02.02	00.15	01.29	01.08	03.03	07.07	0	00.35	44	50	19
17	136	84	0,109028	00.15	01.54	03.02	03.25	08.05	-0.07	00.35	31	47.01.00	17
4	160	84	01.48	00.14	01.28	02.01	01.04	02.06	-0.01	00.38	33.03.00	37.05.00	4
23	163	84	01.43	00.13	01.45	03.02	02.03	07.01	-0.12	00.39	36.09.00	37.02.00	23
16	168	84	01.34	00.13	01.05	03.05	02.25	7	-0.17	00.39	28.06.00	37.02.00	16
21	168	84	01.34	00.13	01.23	01.07	0,11	05.08	-0.02	00.39	42.09.00	37.02.00	21
2	170	84	01.03	00.13	0,068	-0.1	01.27	01.09	00.02	00.39	39.03.00	37.07.00	2
27	185	84	01.05	00.13	01.44	03.02	0,11	6	-0.06	00.04	29.08.00	39.04.00	27
5	198	84	0,057639	00.13	0,069	0	01.01	00.01	00.34	00.04	41.07.00	41	5
31	199	84	0,05625	00.13	01.31	02.03	01.34	02.04	00.49	00.04	31	41	31
22	202	84	0,052778	00.13	01.03	00.03	01.04	00.04	00.04	00.04	44	41.04.00	22
28	203	84	0,051389	00.13	0,065	-0.4	0,068	-0.1	00.01	00.04	45.02.00	41.05.00	28

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ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT		OUTFIT		PT-ME ASURE	EXACT	MATCH	Item
					MNSQ	ZSTD	MNSQ	ZSTD	CORR.	EXP.	OBS%	EXP%	
34	206	84	0,047917	00.13	0,051	-2.2	0,051	-2.2	00.54	00.04	51.02.00	41.09.00	34
25	225	84	00.36	00.13	0,051	-2.1	0,05	-2.2	0,046	00.04	52.04.00	46.01.00	25
14	233	84	00.21	00.14	0,043	-3.1	0,042	-3.1	00.43	00.04	57.01.00	48.01.00	14
1	234	84	00.19	00.14	0,059	-1.1	0,061	-0.8	00.28	00.04	48.08.00	48.02.00	1
37	234	84	00.19	00.14	01.33	02.01	01.41	02.05	00.31	00.04	36.09.00	48.02.00	37
38	236	84	00.16	00.14	0,058	-1.2	0,056	-1.3	00.52	00.04	56	48.04.00	38
39	241	84	00.06	00.14	0,067	-0.2	0,067	-0.2	00.58	00.39	47.06.00	50.02.00	39
6	243	84	00.02	00.14	0,057	-1.3	0,058	-1.1	00.45	00.39	52.04.00	50.03.00	6
29	259	84	-0.32	00.15	0,046	-2.4	0,045	-2.4	0,05	00.38	58.03.00	50.08.00	29
35	261	84	-0.36	00.15	00.05	-3.8	00.51	-3.7	0,044	00.38	64.03.00	50.06.00	35
9	264	84	-0.43	00.15	0,05	-1.9	0,051	-1.8	00.55	00.38	56	50.05.00	9
20	264	84	-0.43	00.15	01.01	00.07	01.01	00.07	00.26	00.38	46.04.00	50.05.00	20
40	266	84	-0.48	00.15	0,062	-0.7	0,061	-0.7	00.49	00.38	54.08.00	50.04.00	40
41	267	84	-0.5	00.16	01.02	00.02	01.07	00.05	00.46	00.38	45.02.00	50.08.00	41
11	268	84	-0.53	00.16	0,047	-2.3	0,045	-2.5	0,044	00.37	66.07.00	50.07.00	11
7	270	84	-0.58	00.16	0,05	-1.8	0,048	-2.1	0,043	00.37	60.07.00	51.08.00	7
8	271	84	-0.6	00.16	0,052	-1.7	0,05	-1.9	0,047	00.37	66.07.00	51.07.00	8
3	273	84	-0.65	00.16	01.13	00.08	01.19	01.02	00.43	00.37	45.02.00	51.08.00	3
10	276	84	-0.73	00.16	00.06	-2.8	0,043	-2.7	00.57	00.36	70.02.00	51.05.00	10
33	276	84	-0.73	00.16	0,062	-0.7	0,059	-0.9	00.04	00.36	54.08.00	51.05.00	33
36	278	84	-0.78	00.16	0,058	-1.1	0,054	-1.4	00.55	00.36	63.01.00	52.04.00	36
12	279	84	-0.81	00.17	0,052	-1.6	0,051	-1.7	0,043	00.36	65.05.00	52.03.00	12
30	281	84	-0.87	00.17	0,06	-0.8	0,06	-0.8	00.06	00.36	63.01.00	52.06.00	30
42	286	84	-1.01	00.17	0,043	-2.6	00.59	-2.8	0,045	00.35	69	53.09.00	42
24	287	84	-1.04	00.17	0,068	0	0,063	-0.5	0,042	00.35	57.01.00	54.02.00	24
44	287	84	-1.04	00.17	0,065	-0.4	00.09	-0.5	00.51	00.35	61.09.00	54.02.00	44
13	288	84	-1.07	00.18	01.03	00.02	0,067	-0.2	00.46	00.35	53.06.00	54.02.00	13
32	288	84	-1.07	00.18	00.57	-3	00.56	-3	00.56	00.35	66.07.00	54.02.00	32
15	290	84	-1.14	00.18	0,106	04.04	0,096	03.08	00.41	00.34	47.06.00	54.08.00	15
26	293	84	-1.23	00.18	01.01	00.06	01.17	1	00.38	00.34	58.03.00	55.07.00	26
43	297	84	-1.37	00.19	0,047	-2	0,044	-2.3	00.56	00.33	69	59	43
45	299	84	-1.45	00.19	01.41	02.01	01.28	01.05	00.46	00.32	66.07.00	60.04.00	45

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ENTRY NUMBER	TOTAL SCORE	TOTAL COUNT	MEASURE	MODEL S.E.	INFIT		OUTFIT		PT-ME ASURE		EXACT	MATCH	Item
					MNSQ	ZSTD	MNSQ	ZSTD	CORR.	EXP.	OBS%	EXP%	
MEA	238.	84	0	00.15		-0.1					51.08.0	48.08.0	
N	04.0				0,069		01.19	00.06			0	0	
	0												
S.D.	49.0	0	1	00.02	00.32	2	0,051	03.03			11.07	06.01	
	7.00												

3.3. Item Difficulty Level

The difficulty level of the item items can be reviewed from the table of 13 item measure orders. From this table it is known that the SD value or standard deviation is 1.00. The difficulty level of the items can be categorized into: (1) very difficult with the formula > +1 SD, (2) difficult with the formula (0.0 logit + 1 SD), (3) easy with the formula (0.0 logit – 1 SD), (4) very easy ≤ – 1 SD. Thus, the value limit for the very difficult category is more than 1.00, the difficult category is 0.0 – 1.00, the easy category is 0.0 – (-1.00), and the very easy category is less than -1.00.

Based on the level of difficulty starting from the most difficult item to the easiest by looking at the logit value of each item in table 13, it is known that there are 9 items that fall into the very difficult category, namely items 18, 19, 17, 4, 23, 16, 21, 2, 27. The difficult category has 12 items, namely numbers 5, 31, 22, 28, 34, 25, 14, 1, 37, 38, 39, 6. The easy category has 15 items, namely numbers 29, 35, 9, 20, 40, 41, 11, 7, 8, 3, 10, 33, 36, 12, 30. The very easy category has 9 items, namely numbers 42, 24, 44, 13, 32, 15, 26, 43, 45. Based analysis of the level of difficulty can be seen that the item statement items that can be understood by students are as many as 36 item statements and as many as 9 item statement items that are difficult for students to understand.

So, the academic integrity instrument has a group tendency with moderate difficulty level. Thus the number of valid statement items that can be used in the academic integrity instrument is 36 item statement items. In accordance with the academic integrity instrument developed by The International Center for Academic Integrity refers to the theory that academic integrity is a sense of commitment to five values which include honesty, trust, fairness, respect and responsibility.

3.4. Item Conformance Level

In the suitability level of the items, interpreting the items function normally to measure Academic Integrity so that there are no misconceptions among individuals regarding the items studied based on data processing using winstep in table 10.1, namely fit order items. Based on table 10.1, the fit order items can be analyzed based on the MNSQ, OUT FIT ZSTD, and POINT MEASURE CORRELATION columns. The criteria for examining the suitability of item fit or item misfit (misfit), namely the MNSQ outfit value is greater than 0.5 and less than 1.5, the closer to 1 the better. Outfit ZSTD more than -2.0 and less than +2.0, the closer to 0 the better. Point measure correlation is more than 0.4 and less than 0.85. Items can be reviewed in a fit manner if they meet at least 1 of the 3 criteria.

Based on the analysis of the suitability of the items, the statement items are appropriate or fit, namely items that represent the dimensions of academic integrity. According to Gill (2013) academic integrity is a commitment to action in education, research and scholarship which contains five aspects including: 1) honesty; 2) trust; 3) fairness; 4) respect; 5) and

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responsibility. The values of the items that represent the dimensions of academic integrity are 0.83; 0.21; 0.76; 0.81; 0.19.

3.5. Rating Scale Analysis

Rating scales were developed to analyze data with a number of response categories on all sets of items that measure constructs (George, 2013). This diagnosis is carried out to find out whether the participants understand the differences in the answer choices at levels 1, 2, 3, 4 of academic integrity. The difference in answers is understood by respondents if the observe average and andrich threshold values increase according to the level, in detail the andrich threshold values can be seen in winstep table 3.2.

Table 3. Academic Integrity Likert Scale

Category Observed				Obsvd Sample		Infit Outfit		Andrich Threshold	Category Measure
Label	Score	Count	%	Avrge	Expect	MNSQ	MNSQ		
1	1	502	13	-0.89	-0.98	1.08	1.12	NONE	(-2.31)
2	2	683	18	-0.20	-0.14	0.85	0.80	-0.88	-0.79
3	3	1518	40	0.65	0.70	1.04	1.04	-0.51	0.62
4	4	1077	28	1.40	1.35	1.00	1.59	1.38	(2.59)

Table 3 shows suitability and both increase at alternative levels 1, 2, 3, 4. The results of the analysis show that the level of the academic integrity instrument corresponds to the real conditions of student behavior. In this case, it means that students show their understanding of the answer choices that exist in each item of the instrument statement.

3.6. Instrument Analysis

For instrument analysis, the information presented in winstep table 3 summary statistics is used. In detail the analysis of the instrument can be seen in the table. The research findings show that the Person measure item has an average score of all participants in working on the instrument items for disclosing student academic integrity data. The ability of participants is generally greater because the average person value shows a greater value than the average item (where the average item is 0.00 logit). This means that the ability of the participants is generally greater than the difficulty of the instrument items.

The Cronbach alpha value which represents the interaction between the person and the item items as a whole is 0.86 including the very good and effective category with high consistency, so it can be used in research. Based on this, the items asked to students can be understood easily so that students do not have misconceptions about the items. Furthermore, the findings from the results of research on the value of person reliability are 0.84 as an indicator of the consistency of the respondents' answers.

This means that the quality of the items on the academic integrity variable instrument is in a good and acceptable category. While the findings from the results of the research item reliability of 0.97 as an indicator of the quality of the item items in the instrument, are

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classified as special categories. This means that the quality of an instrument that has high reliability is one of the characteristics of a good instrument (Adi et al., 2022; Erfan et al., 2020; Mohajan, 2017).

Both the person table and the data item table used in table 4 are the INFIT MNSQ or MNSQ OUTFIT tables. If the criteria in the person table and item table are close to 1, it means the better because the ideal value is 1. In the person table, the average value of INFIT MNSQ and OUTFIT MNSQ are 1.01 and 1.07 respectively. Meanwhile, if you look at the item table, it is known that the average value the mean INFIT MNSQ and OUTFIT MNSQ were 0.99 and 1.19, respectively. So based on the average value above, it can be seen that both of them have ideal criteria. The ideal value for ZSTD is 0. If the ZSTD value is close to 0, it means the better. Meanwhile the findings from research results mean the average value for each INFIT ZSTD and OUTFIT ZSTD in persons is -0.2 and -0.2. While the INFIT ZSTD and OUTFIT ZSTD values for each item are -0.1 and 0.6. Thus the quality of person items can be said to be good because both have an average value close to 0.

Tabel 4. Person Statistics Summary

Total Score		Count	Measure	Model Error	Infit		Outfit	
					MNSQ	ZSTD	MNSQ	ZSTD
MEAN	127.7	45.0	0.51	0.21	1.01	-0.2	1.07	-0.2
S.D.	13.3	0.0	0.56	0.01	0.52	2.2	1.05	2.2
MAX	160	45.0	2.14	0.27	4.14	8.5	9.90	9.9
MIN.	70	45.0	-1.80	0.19	0.29	-5.0	0.30	-4.7
REAL RMSE		0.22	TRUE SD	0.51	SEPARATION	2.28	Person RELIABILITY	0.84
MODEL RMSE		0.21	TRUE SD	0.52	SEPARATION	2.52	Person RELIABILITY	0.86
S.E. OF Person Mean = 0.06								

Tabel 5. Item Statistics

Total Score		Count	Measure	Model Error	Infit		Outfit	
					MNSQ	ZSTD	MNSQ	ZSTD
MEAN	238.4	84.0	0.00	0.15	0.99	-0.1	1.19	0.6
S.D.	49.7	0.0	1.00	0.02	0.32	2.0	0.73	3.3
MAX	299.0	84.0	2.28	0.19	1.92	4.4	3.86	8.5
MIN.	124.0	84.0	-1.45	0.13	0.50	-3.8	0.51	-3.7
REAL RMSE		0.16	TRUE SD	0.99	SEPARATION	6.03	Item RELIABILITY	0.97
MODEL RMSE		0.15	TRUE SD	0.99	SEPARATION	6.41	Item RELIABILITY	0.98
S.E. OF Person Mean = 0.15								

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The last is related to the separation or grouping of persons and items. Individual separation shows how well the set of items in the student academic integrity instrument is spread out over the logit ability range. A good instrument is an instrument that is structured because the items in it are able to reach individuals with high to low levels of ability. So if the greater the individual separation, the instrument used will be better (Hagquist & Andrich, 2017; Van Zile-Tamsen 2017). To define the significance of the construct measured, the index used is when the item separation shows how large the sample subject to measurement is spread along a linear interval scale. If the grain separation is higher, it means that the measurements made are better.

The greater the separation value, the better the quality of the person and instrument as a whole. The separation value can be calculated using the formula H={(4 x separation) + 1}]/3. Based on the findings from the research results from the output table 4, it is known that the separation value for persons is 2.28 and the value for items is 6.03. The separation value is calculated using the formula H={(4 x separation) and it is found that the separation value for persons is 3.37 rounded up to 3, while the separation for items is 8.37 rounded up to 8. Thus the participants in the academic integrity instrument research can be categorized into 3 groups and and at the difficulty level of the item items, they are divided into 8 groups based on the value of the separation of the research participants.

4. CONCLUSION

The findings from the research results reveal that the academic integrity instrument has sufficient item items to be used in the academic integrity instrument, which totals 45 items. Testing on 80 respondents gave the result that the Cronbach Alpha value which represents the interaction between respondents and item items as a whole falls into the perfect category. The reliability value of the respondent as an indicator of the consistency of the respondent's answers is included in the good and acceptable category. Furthermore, there are 9 items that are difficult for respondents to understand, namely items 18, 19, 17, 4, 23, 16, 21, 2, 27. So it is necessary to try out the academic integrity instrument by removing these item items. For further research, it is hoped that the researcher will conduct an item bias detection test based on gender.

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