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THE INSTRUMENT DEVELOPMENT OF STUDENTPRENEUR ATTITUDE ASSESSMENT FOR STUDENT IN BOGOR

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Abstract : *This research aims to develop and produce affective domain assessment instruments especially attitudes that are valid and reliable by discussing studentpreneurs in entrepreneurship subjects. This research used research and development (R&D) methods with the Structural Equation Modeling (SEM) method using AMOS software to determine the level of validity and the value of Goodness of Fit (GOF). Collecting data with a questionnaire consisting of 30 statement items regarding studentpreneur attitudes, which consists of four dimensions namely; confidence, creative thinking, risk taking, and leadership. Respondents in this study were students of class XI at SMKN 1 Bogor and SMKN 1 Ciomas. The data processing stage used the validity test with Confirmatory Factor Analysis (CFA), the reliability test stage by looking at the Construct Reliability (CR) and Average Variance Extracted (AVE) values, it was found that the 30 statement items were valid and reliable. Furthermore, standardization of the instrument meets the criteria for obtaining the value of Goodness of Fit. The studentpreneur attitude level of students at SMKN 1 Bogor and SMKN 1 Ciomas from five categories is in the low (3%), medium (7%), high (17%) and very high (73%) categories.*

Keywords : Instrument Development, Attitude Assessment, Studentpreneur

BACKGROUND

Indonesia is a country with the fourth largest population in the world. The population in Indonesia has increased from year to year, a high increase in population will have an impact on economic problems, one of which is poverty. The problem of poverty in Indonesia reaches 9.36 percent , the impact of the problem of poverty is caused because there are still many people who are not working or are called unemployed. The open unemployment rate in Indonesia is 5.45 percent (BPS, 2023). It is this unemployment experienced by some people that makes it difficult for people to make ends meet.

Based on the unemployment data, it is known that human resources are one of the main factors that must be well prepared in facing the competition in the world of work. Entrepreneurship is an element that can make some economic problems can be solved and overcome. Quoted from the Business Feasibility Study book, the economy can move when the four factors of production; land, capital, human resources, and entrepreneurship, function optimally (Purwana & Hidayat, 2016). The four factors of production are interrelated and play an important role, but entrepreneurship is the most influential in organizing the other factors. Entrepreneurs are people who have the courage to take risks to open a business on various occasions (Wijaya, 2017).

The entrepreneurial ratio in Indonesia is at 3.74 percent (Situmorang, 2021). The influence of the number of entrepreneurship in Indonesia will have an impact on the economy so that a new generation is needed. Growing an interest in entrepreneurship from an early age in students will prepare them to face economic challenges in the future (Prasetyo Ari Bowo, 2013). With the provision of entrepreneurial skills, students will be able to manage themselves in a competitive environment. Students who are capable of entrepreneurship while still studying have the advantage of being studentpreneurs.

Studentpreneur is a new term from the combination of two words namely student and entrepreneur¸ is a term for students who have two roles at once, namely as students and also entrepreneurs in schools. Businesses carried out by students can be carried out both inside and outside educational institutions with innovative products and generate income from their business activities and based on knowledge obtained at school (Pratiwi, 2018). Being a studentpreneur requires skills such as; managerial skills, conceptual skills, human skills, decision making skills and time management skills (Mulawat, 2019). In schools, studentpreneur abilities need to be grown through entrepreneurship-based learning. Entrepreneurship education really needs to be integrated into the education curriculum by integrating it into subjects, extracurriculars, textbooks, school environmental culture, and local content (Barnawi & Arifin, 2012) .

In looking at the achievements of entrepreneurship-based learning in schools, it is necessary to do an assessment. Assessment can be used as a reference by the teacher to find out the extent to which learning objectives are being implemented, while for students the

assessment is used to determine the extent of ability to follow lessons and as motivation for learning. Learning and assessment must develop student competencies related to abilities from various aspects such as thinking skills (cognitive aspects), attitude assessment (affective aspects), and skill abilities (psychomotor aspects).

In this study, the assessment instrument that will be developed is on entrepreneurship education subjects that focus on affective aspects. Generally, in measuring educational success, it is only measured based on superiority in the cognitive domain, so that the assessment of the affective and psychomotor domains is not given enough attention (Arum et al., 2022). The affective domain can determine the success of one's learning, judging from the interest in subjects to achieve success , all educational institutions must pay attention to the affective domain in designing learning programs (Mardapi, 2015).

In this study, there is a theoretical gap, there is still little research on studentpreneur attitudes, so it will be a novelty in research to measure students' studentpreneur attitudes. While the empirical gap, this assessment is to determine the level of studentpreneur attitude possessed by students at the school where the research was carried out. So based on the description of the background of the problem above, the researcher is interested in developing and knowing the quality of the evaluation by paying attention to the assessment of studentpreneur attitudes in entrepreneurship-based learning.

LITERATURE REVIEW

Assessment is a systematic and interconnected activity to collect information and make decisions based on certain criteria from the process and learning outcomes (Arifin, 2011). According to Muslich in Sri Mukminati Nur, assessment generally aims to reward student achievement and improve learning programs and activities (Nur, 2015). The achievement of student learning outcomes is obtained from the results of developing student competencies related to abilities from various aspects. As stated by Suharsimi Arikunto in his book (Arikunto, 2018), there are three major domains or domains which are hereinafter referred to as taxonomies namely; the cognitive domain related to students' knowledge, the affective domain related to attitudes or values, and the psychomotor domain related to students' skills and abilities. In this study the focus is on assessing attitudes or belonging to the affective domain.

Zaenal Arifin in (Sukanti, 2011) explains there are two things related to affective assessment that must be assessed. First, the affective competence to be achieved in learning includes the level of response, appreciation, assessment and internalization. Second, students' attitudes and interests towards subjects and the learning process. In the learning process there are four types of affective characteristics, namely attitudes, interests, self-concept and values.

METHOD

Research and development (R&D) methods using a model that had been developed and modified according to Sugiyono. The sample in this study was obtained from the calculation of the slovin formula resulting in 264 respondents who were class XI students at SMKN 1 Bogor and SMKN 1 Ciomas. Data collection used a questionnaire which was distributed online using the Google form, consisting of 30 statement items regarding studentpreneur attitudes which were divided into four dimensions, namely self-confidence, creative thinking, risk-taking and leadership.

The stages in this study were validated by experts and panelists until they were declared fit for distribution to students. The results of the data obtained will then be processed through a validity test using Confirmatory Factor Analysis (CFA), reliability testing by looking at the Construct reliability (CR) and Average Variance Extracted (AVE) values, and instrument standardization using the Goodness of Fit (GOF) criteria.

RESULTS AND DISCUSSION

The instrument of studentpreneur attitude assessment was developed through the initial stage, namely expert validation by expert lecturers to obtain theoretical input. In this study, three expert lecturers were needed consisting of entrepreneurship experts, linguists, and instrument experts. Panelist validation consisting of entrepreneurship subject teachers at school. Furthermore, improvements were made to the validator's and panelist's input, then the researcher reconfirmed the final results of the instrument which had been corrected until it was declared feasible to be tested on students.

Limited trials or small-scale trials were conducted on 30 respondents who were students at SMKN 1 Bogor. The results of this limited trial found that all of the statement items tested were valid (30 valid items) with N = 30. Furthermore, the final field test or large-scale trial was carried out to 264 respondents who were class XI students at SMKN 1 Bogor and SMKN 1

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Ciomas. Data processing in this final trial used Structural Equation Modeling (SEM) in the AMOS application, instrument standardization using the Goodness of Fit (GOF) criteria.

Validity test to find out the similarity between the collected data and the actual data so that valid research results are obtained (Sugiyono, 2017) . To measure the validity of the questionnaire used Confirmatory Factor Analysis (CFA). The following is a picture of the results of the First Order CFA calculation using the AMOS software.

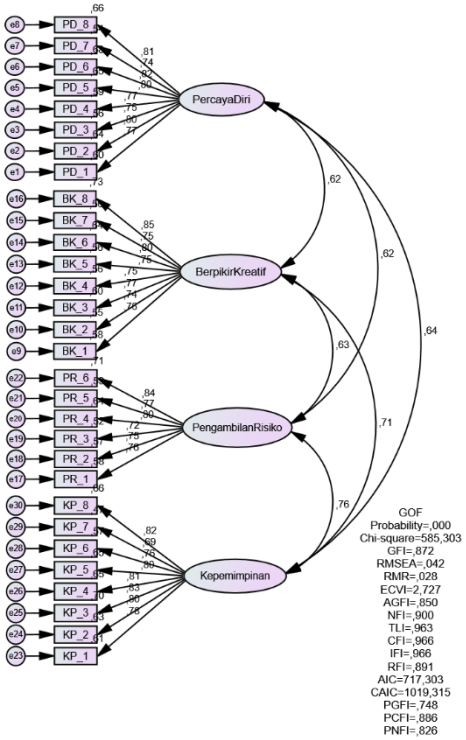

Figure 1. First Order CFA Studentpreneur Attitude Assessment Instrument
Source: AMOS software output

This first test is carried out by the CFA test or confirmatory factor analysis, items can be declared valid if they meet the criteria of "Loading Factor" or "Standardized Loading Estimate" having an estimate value > 0.5. Have *a t-value* or *Critical Ratio* (CR) > 1.96 with *probability* (P) < 0.05 (*** sign is significant < 0.001). So that the results of this field test found that all items (30 items) with N = 264 were declared valid. The following is a test of the validity of each dimension presented in the table of validity test results.

Table 1. Results of the Studentpreneur Attitude Validity Test

Indicator	Manifest	Standardized Regression Weight	t-Value	p-Value	Information
Self-confident	PD 1	0.775			Valid
	PD 2	0.800	14,052	***	Valid
	PD 3	0.747	12,914	***	Valid
	PD 4	0.771	13,231	***	Valid
	PD 5	0.803	14,127	***	Valid
	PD 6	0.822	14,295	***	Valid
	PD 7	0.736	12,644	***	Valid
	PD 8	0.810	14,074	***	Valid

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Creative Thinking	BK 1	0.762			Valid
	BK 2	0.739	12.506	***	Valid
	BK 3	0.775	13.138	***	Valid
	BK 4	0.751	12,720	***	Valid
	BK 5	0.749	12,574	***	Valid
	BK 6	0.799	13,620	***	Valid
	BK 7	0.746	12,643	***	Valid
	BK 8	0.853	14,652	***	Valid
Risk Taking	PR 1	0.759			Valid
	PR 2	0.754	12,527	***	Valid
	PR 3	0.721	11,889	***	Valid
	PR 4	0.803	13,401	***	Valid
	PR 5	0.765	12,707	***	Valid
	PR 6	0.842	14,327	***	Valid
Leadership	KP 1	0.778			Valid
	KP 2	0.797	14.151	***	Valid
	KP 3	0.834	14,907	***	Valid
	KP 4	0.808	14,283	***	Valid
	KP 5	0.804	14,157	***	Valid
	KP 6	0.756	13.134	***	Valid
	KP 7	0.687	11,739	***	Valid
	KP 8	0.815	14,494	***	Valid

Source: Processed by researchers

The reliability test in this study was carried out by looking at the Construct Reliability (CR) and Average Variance Extracted (AVE) values in SEM through the following formula:

Construct Reliability (CR) $$CR = \frac{(\sum std.loading)^2}{(\sum std.loading)^2 + \sum \varepsilon j}$$

Average Variance Extracted (VE) $$VE = \frac{\sum std.loading^2}{\sum std.loading^2 + \sum \varepsilon j}$$

A study can be said to be reliable if the acceptable reliability threshold values are CR > 0.7 and AVE > 0.5. The following is the calculation of CR and AVE:

Table 2. CR and AVE Calculation Results

Dimensions		SLF	SLF ²	Error	Information
Self-confident	PD 1	0.775	0.601	0.399	CR = 0.927 AVE = 0.614 **Dimensions Self-confident = Reliable**
	PD 2	0.800	0.640	0.360	
	PD 3	0.747	0.558	0.442	
	PD 4	0.771	0.594	0.406	
	PD 5	0.803	0.645	0.355	
	PD 6	0.822	0.676	0.324	
	PD 7	0.736	0.542	0.458	
	PD 8	0.810	0.656	0.344	

Creative Thinking	BK 1	0.762	0.581	0.419	CR = 0.922 AVE = 0.597 **Dimensions Creative Thinking = Reliable**
	BK 2	0.739	0.546	0.454	
	BK 3	0.775	0.601	0.399	
	BK 4	0.751	0.564	0.436	
	BK 5	0.749	0.561	0.439	
	BK 6	0.799	0.638	0.362	
	BK 7	0.746	0.557	0.443	
	BK 8	0.853	0.728	0.272	
Risk Taking	PR 1	0.759	0.576	0.424	CR = 0.900 AVE = 0.601 **Dimensions Risk Taking = Reliable**
	PR 2	0.754	0.569	0.431	
	PR 3	0.721	0.520	0.480	
	PR 4	0.803	0.645	0.355	
	PR 5	0.765	0.585	0.415	
	PR 6	0.842	0.709	0.291	
Leadership	KP 1	0.778	0.605	0.395	CR = 0.928 AVE = 0.618 **Dimensions Leadership = Reliable**
	KP 2	0.797	0.635	0.365	
	KP 3	0.834	0.696	0.304	
	KP 4	0.808	0.653	0.347	
	KP 5	0.804	0.646	0.354	
	KP 6	0.756	0.572	0.428	
	KP 7	0.687	0.472	0.528	
	KP 8	0.815	0.664	0.336	

Source: Processed by researchers

Standardization of the instrument by measuring the suitability of the model through the Goodness of Fit (GOF) criteria. The results of the CFA analysis using the GOF criteria at this initial standardization stated that there were three criteria that had not been met.

Table 3. Table of Goodness of Fit (GOF) criteria

NO.	FIT SIZE	CRITERIA	RESULTS	INFORMATION
	Absolute Fit			
1.	*Chi Square P-Value*	≥ 0.05	< 0.01	Unwell
2.	*Goodness of Fit Index* (GFI)	≥ 0.90	0.872	Unwell
3.	*Root Mean Square Error of Approximation* (RMSEA)	≤ 0.08	0.042	fit
	Incremental Fit			
4.	*Adjusted Goodness of Fit Index* (AGFI)	≥ 0.90	0.850	Unwell
5.	*Tucker Lewis Index* (TLI)	≥ 0.90	0.963	fit
6.	*Normal Fit Index* (NFI)	≥ 0.90	0.900	fit

Parsiminious Fit				
7.	*Parsimonius Normed Fit Index* (PNFI)	0.60 – 0.90	0.826	fit
8.	*Parsimonious goodness of fit index* (PGFI)	≥ 0.60	0.748	fit

Source: Processed by researchers

The table above shows the results that most of the models being developed already meet the fit criteria, but on the Chi-square P-Value, GFI and AGFI the results are close to the fit criteria. In order for the model to be fit, the researcher will modify the model which is based on Arbuckle's theory in (Hanike & Damirah, 2021) which discusses how to modify the model by looking at the resulting modification indices . Modification indices are part of the output of the AMOS software which will provide recommendations for adding lines/connections from error covariance which can affect the GOF criteria so as to make the model more fit. The output results of modification indices can be seen in the table.

Table 4. Modification Indices

Covariances	M.I	Covariances	M.I
e27 ↔ e28	17,953	e10 ↔ e15	8,497
e4 ↔ e30	16,841	e10 ↔ e13	8,071
e4 ↔ e8	11,643	e1 ↔ e6	7,643
e12 ↔ e13	11.025	e24 ↔ e28	7,217
e12 ↔ e24	10,828	e7 ↔ e13	7,050
e5 ↔ e27	10,048	e8 ↔ e11	6,420
e12 ↔ e28	9,471	e10 ↔ e11	6,360
e3 ↔ e6	9,415	e5 ↔ e11	6,252
e4 ↔ e26	8,972	e5 ↔ e12	6,161

Source: Processed by researchers

Based on the output results above, the connecting line that has the largest MI value will be taken. The MI value indicates the magnitude of the value that will affect the value of the GOF criteria when these variables are linked. Then e27 and e28 are connected, and so on until you get the results needed to reach the GOF criterion value. After making a connection line, the GOF criterion output results have increased. The following is an illustration of the modified output diagram and the resulting GOF criteria:

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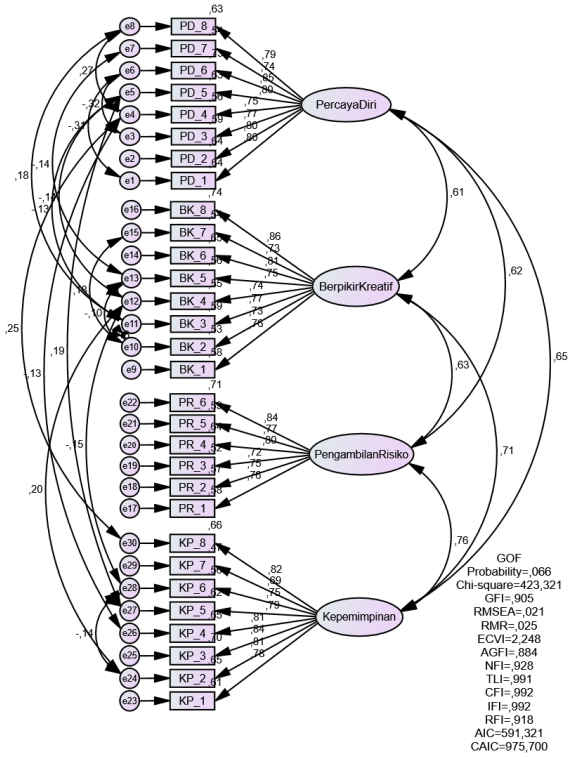

Figure 2. Output modification diagram

Source: AMOS software output

Table 5. Goodness of Fit (GOF) criteria after modification

NO.	FIT SIZE	CRITERIA	RESULTS	INFORMATION
	Absolute Fit			
1.	*Chi Square P-Value*	≥ 0.05	0.066	fit
2.	*Goodness of Fit Index* (GFI)	≥ 0.90	0.905	fit
3.	*Root Mean Square Error of Approximation* (RMSEA)	≤ 0.08	0.021	fit
	Incremental Fit			
4.	*Adjusted Goodness of Fit Index* (AGFI)	≥ 0.90	0.884	Approaching Fit
5.	*Tucker Lewis Index* (TLI)	≥ 0.90	0.991	fit
6.	*Normal Fit Index* (NFI)	≥ 0.90	0.928	fit
	Parsiminious Fit			
7.	*Parsimonius Normed Fit Index* (PNFI)	0.60 – 0.90	0.813	fit
8.	*Parsimonious goodness of fit index* (PGFI)	≥ 0.60	0.742	fit

Source: Processed by researchers

In the table above the output results show the model after modification and has increased from the previous results so that it can be concluded that 7 of the 8 GOF criteria have met the fit criteria so that the overall fit of the model is good.

CONCLUSION

Based on the results of this resarch on the development of studentpreneur attitude assessment, it can be concluded:

1. Of the 30 statement items developed and tested on 264 students, validity was tested using Confirmatory Factor Analysis (CFA) and reliability tests used values from Construct Reliability (CR) and Average Variance Extracted (AVE) in AMOS software . It was found that the 30 items were declared valid and reliable. Furthermore, standardization of the instrument was carried out using the Goodness of Fit (GOF) criteria and it was found that 7 of the 8 criteria met the fit criteria so that overall it was good.
2. studentpreneur attitude level of students at SMKN 1 Bogor and SMKN 1 Ciomas from five categories is in the low (3%), medium (7%), high (17%) and very high (73%) categories.

BIBLIOGRAPHY

Arifin, Z. (2011). *Learning Evaluation* . Jakarta: PT Juvenile Rosdakarya.

Arikunto, S. (2018). *Fundamentals of Educational Evaluation* . Jakarta: Earth Script.

Arum, AE, Khumaedi, M., & Susilaningsih, E. (2022). Development of Affective Domain (Attitude) Self-Confidence Assessment Instruments in Students. *Basicedu Journal* , *6* (3), 5467–5474. https://doi.org/10.31004/basicdu.v6i3.3203

Barnawi, & Arifin, M. (2012). *School Preneurship: Awakening Students' Entrepreneurial Spirit & Attitude* (A. Safa (ed.)). Yogyakarta : AR-RUZZ MEDIA.

Hanike, Y., & Damirah. (2021). Modification of the Structural Equation Model (Sem) Analysis Model on Market Reactions in Indonesian Stock Exchange Companies Through Modification Indices. *Mathematics And Learning* , *6* (2), 127–142. https://doi.org/10.33477/mp.v6i2.665

Mardapi, D. (2015). *Educational Assessment and Evaluation Measurement* . Yogyakarta: Nuha Medika.

Mulawat, MS (2019). *Educational Entrepreneurship* . Deepublish.

Nur, SM (2015). Development of Psychomotor Assessment Tools for Students. *Journal of Biotech* , *3* (1), 151–169.

Prasetyo Ari Bowo. (2013). Kidpreneur an Early Effort of Planting Entrepreneurship in Children to Embrace The Future. *Indonesian Journal of Early Childhood Education Studies* , *2* (1), 35–39. https://doi.org/https://doi.org/10.15294/IJECES.V2I1.9220.

Pratiwi, IE (2018). Quality of Studentpreneur Ability Assessment Instrument in Entrepreneurship-Based Learning at SMK Negeri 6 Yogyakarta. *Journal of Technology and Vocational Education* , 1–9.

Purwana, D., & Hidayat, N. (2016). *Business Feasibility Studies* (1st ed.). Jakarta : Rajawali Press.

Situmorang, AP (2021). *The Average Entrepreneurial Ratio in Developed Countries is 12 Percent, New Indonesia is 3.74 Percent* . Coverage6. https://www.liputan6.com/business/read/4617800/rata-rata-rasio-wirausaha-di-negara-maju-12-persen-indonesia-baru-374-persen

Sugiyono. (2017). *Quantitative Research Methods, Qualitative, and R&D* . Bandung : Alphabet.

Sukanti. (2011). Affective Assessment in Accounting Learning. *Journal of Indonesian Accounting Education* , *9* (1), 74–82. https://doi.org/10.21831/jpai.v9i1.960

Wijaya, D. (2017). *Entrepreneurship Education for Schools and Universities* . Yogyakarta : Student Library.