

Reliability of Test Frequently Used Factors Entrepreneurial Readiness Cadets in Vocational School

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Abstract There are several factors that influence cadet activities in starting or carrying out an entrepreneurial process. Interest, motivation, knowledge, desire, character and readiness factors are some factors that can be used. When cadets are said to be ready to start the process of opening a business, they will definitely come into contact with one of these factors. The cadet has a feeling of being ready when he is able to do and start opening a new business. Testing the validity of an instrument is absolutely necessary. Factor analysis is a technique used to look for factors that are able to explain the relationship or correlation between the various independent indicators observed. It is also used to identify a relatively small number of factors that can be used to explain a large number of variables. interconnected. So that the variables in one factor have a high correlation, while the correlation with the variables in other factors is relatively low. In this study, primary data obtained through questionnaires were then processed using descriptive analysis, chi square analysis, and Frequentist Individual Test Reliability Statistics analysis.

Keywords : Readiness, Entrepreneurship, Cadet, Variables, Reliability Statistics analysis, Vocational Education

Introduction

Interest in entrepreneurship in Indonesia itself is quite lacking. According to global entrepreneurship monitoring, Indonesia only has entrepreneurs around 0.18% of the population. This psychological factor has a negative influence on society so that the entrepreneurial profession is not very attractive. entrepreneurship in the development process in the areas of skills, attitudes and behaviors that will later be needed to create jobs. The world of education is expected to produce outputs that have creative and innovative personalities, think critically, are able to face risks and are collaborative, so that they can compete in the global market. Learning related to entrepreneurship has been introduced in the world of education since early education (kindergarten) to the highest education (college). Capitalizing on entrepreneurial values is considered important to be given from an early age, because the characteristics of entrepreneurship are life skills that must be mastered by 21st century learners. Several years ago, there were several opinions that said that to carry out entrepreneurship activities it cannot be learned or taught and only acquired through direct experience and one's own talent, but in the last few decades entrepreneurship has become a mandatory science that must be taught at all levels of "public and private universities." In

Indonesia, entrepreneurship is taught in various ways which include activities such as courses, seminars, workshops and so on. Entrepreneurship education is considered important because it can change the paradigm of a graduate of an educational institution from a job seeker to a job creator, and prepare the community to face changes in economic development due to the rapid competition and challenges of globalization, especially during the current COVID-19 pandemic crisis, which has a real impact on changes in the economic sector. society that leads to the view that entrepreneurship is an alternative job in the future. The contextual environment and conditions of an entrepreneur are "one of the external causes that come from outside the entrepreneur's personality (Arduto, 2016).



Figure 1. Diagram

Then, the internal factors themselves come from each prospective entrepreneur, where these factors include his character, character, beliefs, personality, motivation, self-efficacy and entrepreneurship education.



Figure 2. Factor Internal Entrepreneurship

Overview Theory

In this researcher there is an interest in carrying out research as an effort to explore factors that influence entrepreneurial interest and readiness in entrepreneurship for cadets at the Surabaya Aviation Polytechnic. In the research problem formulation refers to the process of

finding factors that influence the entrepreneurial interest of cadets and their readiness in entrepreneurship which can be described in the following questions:

- a) Does motivation have an influence on interest in entrepreneurship?
- b) Does one's knowledge of entrepreneurship have an effect on interest in entrepreneurship?
- c) Does the character education obtained by the cadets affect the interest in entrepreneurship?
- d) Does a person's self-efficacy have an influence on the interest in entrepreneurship?
- e) Does a person's interest affect Entrepreneurial Readiness?

For cadets, the process of exploring entrepreneurial potential will greatly assist them in gaining knowledge, motivation, attitudes, desires, interests and readiness to start entrepreneurship so that they are able to create new and different innovations, and are expected to be of value to themselves and others so that they can survive the challenges that lie ahead and take the opportunity as an economic hero for the Indonesian nation. From a job seeker to a job creator

Correlation relationship between variables can be described as follows

1. The effect of self-efficacy on entrepreneurial interests
2. The influence of entrepreneurial knowledge on entrepreneurial interest
3. The influence of motivation on entrepreneurial interest
4. The Influence of Character Education on Interest in Entrepreneurship
5. The Influence of Interest on Entrepreneurial Readiness

Entrepreneurial readiness is a condition of individuals feeling capable and ready armed with the ability, willingness and desire to face various conditions and situations in doing business.

Data collection

In the process of finding answers to the problem formulation and research objectives, it is necessary to collect relevant data. The data collection was carried out in various ways, including literature studies, filling out questionnaires with several instruments from predetermined variables

Data analysis

In this study, factor analysis of cadets' entrepreneurial readiness used descriptive data analysis with quantitative methods. Data analysis is carried out starting with organizing the data because the nature of quantitative data in general is very large and varied. Organizing data so that the data obtained is neat, structured, systematic, and complete. In the process of organizing the correct data, researchers can obtain good quality data, document the analysis carried out, store the data and analyze it for the completion of the research carried out. Data analysis is done by using. The research location is at the Surabaya Aviation Polytechnic

Research Methodology

Population and Sample

Small pilot sample of 7 school population of the Ministry of Air Transportation with 50 samples of respondents with a population of cadets, lecturers and the general public.

Intrument Questionnaire

Validasi Data Responden Berdasarkan Jenis Kelamin

Table 1. Validation of Respondent Data Based on Gender

Descriptive Statistics												
	EFF1		INT1		MOT1		KNW1		CHA1		RED1	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Valid	15	35	15	35	15	35	15	35	15	35	15	35
Missing	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	9.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000	10.000

With a population sample of 50 respondents based on gender

- Female as many as 15 respondents
- Male - Male as many as 35 Respondents

Validasi Data Responden Berdasarkan Status

Table 2. Respondent Data Validation Based on Status

Descriptive Statistics																		
	EFF1			INT1			MOT1			KNW1			CHA1			RED1		
	Cadets	General	Lecturer	Cadets	General	Lecturer	Cadets	General	Lecturer	Cadets	General	Lecturer	Cadets	General	Lecturer	Cadets	General	Lecturer
Valid	38	9	3	38	9	3	38	9	3	38	9	3	38	9	3	38	9	3
Missing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum	10.000	10.000	8.000	10.000	10.000	9.000	10.000	10.000	9.000	10.000	10.000	8.000	10.000	10.000	10.000	10.000	10.000	10.000

With a population sample of 50 respondents based on status

- cadets as many as 38 respondents
- General as many as 9 Respondents
- Lecturers as many as 3 respondents

RESULT AND DISCUSSION

A. Research Instrument Validation Results

The sample data was taken at the Surabaya Aviation Polytechnic as a small pilot sample from 7 school populations of the Ministry of Air Transportation

B. Total Test Correlation and Reliability

Cronbach's Alpha is a reliability measure that has a value ranging from zero to one. Cronbach's alpha is used to measure the reliability of the indicators used in the research questionnaire (McDaniel and Gates, 2013: 289)

Table 3. Cronbach's Alpha . Value Table

Nilai Cronbach's Alpha	Reliability Level
0.0 - 0.20	Less reliable
>0.20 – 0.40	Somewhat Reliable
>0.40 – 0.60	Reliable enough
>0.60 – 0.80	reliable
>0.80 – 1.00	Very Reliable

based on Cronbach's Alpha, a reliable indicator can also be seen from the correlated test-total correlation value. Correlated test-total correlation can also be used to remove unreliable indicators in a variable. The value of correlated test-total correlation in an indicator to be declared reliable is at least 0.50 (Hair et al., 2010: 125).

Information :

- a) N Group The sample population is 50 respondents divided into Female 15 and Male 35
- b) SD (Standard Deviation) the amount of variation or distribution of a number of data values

$$s = \sqrt{\frac{\sum y^2 - \frac{(\sum y)^2}{n}}{n - 1}}$$

standard deviation
n = total number of data
y² = the value of the square of the number of data (i = 1,2,...,n)
y = total value of data

1. Total Test Correlation and Instrument Reliability Self-efficacy

Table 4. Instrument Reliability Self-efficacy

EFF1	I am confident that I can face adversity calmly
EFF2	I am sure that I can overcome every financial problem that befalls me
EFF3	I believe I can compete fairly and honestly
EFF4	I'm sure I can complete the job/task well even though it's a new thing
EFF5	I am sure that I can complete tasks quickly with the knowledge I have
EFF6	I'm sure I can communicate well
EFF7	I'm sure I can work with everyone
EFF8	I believe I can inspire/encourage others
EFF9	I can see and feel the mood of the people on the team
EFF10	I act in everything with a clear purpose, not just following along
EFF11	I am ready to accept criticism and suggestions to improve my business if later I have a business
EFF12	I sometimes need the help of others, but that doesn't mean I depend on others
EFF13	I believe I have the mental readiness to pursue entrepreneurship after graduation
EFF14	I believe I have enough knowledge to start a business
EFF15	I believe I have the skills needed to start a business
EFF16	I'm sure I'll be able to start a business someday

Tabel 5. Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	Average intertest correlation	mean	sd
Point estimate	0.985	0.811	7.580	0.325
95% CI lower bound	0.977	0.695		
95% CI upper bound	0.991	0.900		

Tabel 6. Frequentist Individual Test Reliability Statistics

Test	If test dropped			
	Cronbach's α	Test-rest correlation	mean	sd
EFF1	0.984	0.866	7.260	2.211
EFF2	0.984	0.881	7.120	2.173
EFF3	0.983	0.947	7.900	2.332
EFF4	0.984	0.944	7.540	2.159
EFF5	0.984	0.926	7.600	2.213
EFF6	0.984	0.933	7.800	2.330
EFF7	0.984	0.917	7.860	2.347
EFF8	0.984	0.928	7.780	2.188
EFF9	0.984	0.880	7.520	2.092
EFF10	0.985	0.815	7.420	2.492
EFF11	0.984	0.926	7.940	2.262
EFF12	0.984	0.941	8.060	2.208
EFF13	0.985	0.833	7.480	2.581
EFF14	0.985	0.824	7.020	2.437
EFF15	0.985	0.825	7.120	2.430
EFF16	0.984	0.912	7.860	2.295

2. Total Test Correlation and Reliability of Motivational Instruments

Table 7. Reliability of Motivational Instruments

MOT1	I get a better income if I have a business
MOT2	By becoming an entrepreneur in the field I am in, it will be very profitable
MOT3	I think entrepreneurship will improve a person's standard of living
MOT4	Pursuing a career in the field of entrepreneurship will provide more job satisfaction for me
MOT5	Having a career in entrepreneurship will give me more freedom
MOT6	Being an entrepreneur is my desire
MOT7	With entrepreneurship, I can use my abilities as optimally as possible
MOT8	Entrepreneurship will make me free to make my own business decisions

MOT9	Happiness at work is not being subordinate to others
MOT10	With entrepreneurship, I can apply my ideas freely
MOT11	Entrepreneurship will make me more creative
MOT12	In my opinion, being an entrepreneur will help the community's economy
MOT13	By becoming an entrepreneur, you can create job opportunities for the community

Tabel 8. Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	Average intertest correlation	mean	sd
Point estimate	0.991	0.903	7.748	0.233
95% CI lower bound	0.987	0.820		
95% CI upper bound	0.995	0.948		

Tabel 9. Frequentist Individual Test Reliability Statistics

Test	If test dropped			
	Cronbach's α	Test-rest correlation	mean	sd
MOT1	0.990	0.968	7.920	2.431
MOT2	0.990	0.973	7.820	2.422
MOT3	0.990	0.971	7.960	2.285
MOT4	0.991	0.921	7.560	2.442
MOT5	0.990	0.971	7.780	2.359
MOT6	0.992	0.856	7.300	2.581
MOT7	0.991	0.965	7.560	2.287
MOT8	0.990	0.966	7.540	2.375
MOT9	0.993	0.829	7.500	2.541
MOT10	0.990	0.970	7.780	2.376
MOT11	0.990	0.980	8.000	2.390
MOT12	0.991	0.953	7.960	2.373
MOT13	0.990	0.976	8.040	2.490

3. Total Test Correlation and Interest Instrument Reliability

Tabel 10. Reliability of Motivational Instruments

INT1	I like activities that match my interests and competencies
INT2	I enjoy participating in activities related to entrepreneurship
INT3	I love reading references about successful entrepreneurs
INT4	I want to participate in the world of entrepreneurship after graduation
INT5	I am always interested in attending any exhibition or activity that displays the results of my business
INT6	I try to increase my entrepreneurial skills by trying new things
INT7	If given the opportunity to practice entrepreneurship, I will feel happy to do it seriously

INT8	Armed with the knowledge and skills of entrepreneurship, it is enough to arouse my interest in entrepreneurship
INT9	I have confidence that entrepreneurship is an alternative solution for cadets after graduation
INT10	With good preparation I am sure that I will succeed in an endeavor
INT11	I'm always curious especially for something new and try to develop it
INT12	I am able to recognize the tastes of the people who are in great demand in the future.

Tabel 11. Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	Average intertest correlation	mean	sd
Point estimate	0.987	0.863	7.382	0.307
95% CI lower bound	0.980	0.778		
95% CI upper bound	0.991	0.930		

Tabel 12. Frequentist Individual Test Reliability Statistics

Test	If test dropped		mean	sd
	Cronbach's α	Test-rest correlation		
INT1	0.987	0.852	8.100	2.215
INT2	0.984	0.964	7.380	2.415
INT3	0.986	0.899	7.260	2.248
INT4	0.985	0.940	7.260	2.481
INT5	0.985	0.927	6.960	2.249
INT6	0.985	0.954	7.180	2.472
INT7	0.985	0.960	7.520	2.367
INT8	0.985	0.963	7.240	2.495
INT9	0.988	0.811	7.160	2.629
INT10	0.985	0.943	7.800	2.407
INT11	0.985	0.957	7.420	2.475
INT12	0.986	0.897	7.300	2.150

4. Total Test Correlation and Knowledge Instrument Reliability

Tabel 13. Knowledge Instrument Reliability

KNW1	I have enough knowledge to do a business
KNW2	My entrepreneurship exhibition sparked my ideas to open a business
KNW3	I am active in entrepreneurial activities carried out on my campus
KNW4	I attended seminars to increase knowledge related to business opening strategies
KNW5	I take advantage of something around me so that it generates added value

KNW6	I read about new business opportunities around me
KNW7	Good service will attract consumers

Tabel 14. Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	Average intertest correlation	mean	sd
Point estimate	0.979	0.870	7.060	0.441
95% CI lower bound	0.968	0.767		
95% CI upper bound	0.987	0.936		

Tabel 15. Frequentist Individual Test Reliability Statistics

Test	If test dropped			mean	sd
	Cronbach's α	Test-rest correlation			
KNW1	0.974	0.945		6.860	2.347
KNW2	0.974	0.943		6.980	2.395
KNW3	0.977	0.897		6.420	2.295
KNW4	0.973	0.960		7.100	2.393
KNW5	0.973	0.957		7.100	2.375
KNW6	0.979	0.876		7.060	2.271
KNW7	0.979	0.874		7.900	2.418

5. Total Test Correlation and Character Instrument Reliability

Tabel 16. Knowledge Instrument Reliability

CHA1	I practice religious teachings, be tolerant and live in harmony with followers of other religions.
CHA2	I make myself a person who can always be trusted in words, actions, and work.
CHA3	I respect differences in religion, ethnicity, region, opinions, attitudes, and actions of others
CHA4	I am disciplined through actions that show orderly behavior and obey the rules and regulations.
CHA5	I am serious in overcoming various obstacles to learning, assignments and completing assignments as well as possible.
CHA6	I am very creative, it can be seen from the way I think and do things to produce new innovations.
CHA7	I live independently, it can be seen from the attitude and behavior that it is not easy to depend on others
CHA8	I value the rights and obligations equally between myself and others.
CHA9	I really want to know more deeply and broadly from something that is learned, seen, and heard.
CHA10	I put the interests of the nation and the state above the interests of myself or the group.
CHA11	I have high loyalty, concern, and appreciation for the language, physical, social, cultural, economic, and political environment of

	the nation.
CHA12	I produce something useful to society, and respect the success of others.
CHA13	I enjoy talking, socializing, and working with people.
CHA14	I think other people feel happy and safe in my presence
CHA15	I give good to myself through reading
CHA16	I develop efforts to repair the damage to nature that has already occurred.
CHA17	I give help to other people and communities in need.
CHA18	I am responsible for carrying out my duties and obligations, towards myself, society, the environment (nature, social and culture), the state and God Almighty.

Table 17. Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	Average intertest correlation	mean	sd
Point estimate	0.996	0.932	7.747	0.156
95% CI lower bound	0.994	0.882		
95% CI upper bound	0.997	0.962		

Table 18. Frequentist Individual Test Reliability Statistics

Test	If test dropped		mean	sd
	Cronbach's α	Test-rest correlation		
CHA1	0.996	0.956	8.000	2.222
CHA2	0.996	0.974	7.980	2.162
CHA3	0.996	0.967	7.940	2.161
CHA4	0.996	0.977	7.740	2.098
CHA5	0.996	0.978	7.900	2.206
CHA6	0.996	0.954	7.620	2.147
CHA7	0.996	0.970	7.660	2.016
CHA8	0.995	0.983	7.720	2.119
CHA9	0.996	0.966	7.700	2.102
CHA10	0.996	0.960	7.620	2.147
CHA11	0.996	0.962	7.720	2.241
CHA12	0.996	0.971	7.760	2.105
CHA13	0.996	0.950	7.560	2.233
CHA14	0.996	0.899	7.740	2.230
CHA15	0.996	0.954	7.380	2.108
CHA16	0.996	0.972	7.720	2.138
CHA17	0.996	0.966	7.880	2.191
CHA18	0.996	0.977	7.800	2.204

6. Total Test Correlation and Readiness Instrument Reliability

Tabel 19. Readiness Instrument Reliability

RED1	I am able to create my own work
RED2	I have entrepreneurial capital to open a business
RED3	I will be a successful entrepreneur
RED4	I am ready to take entrepreneurship motivational exercises
RED5	I can be an entrepreneur because I don't have to look for work

Tabel 20. Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	Average intertest correlation	mean	sd
Point estimate	0.982	0.916	7.704	0.192
95% CI lower bound	0.972	0.835		
95% CI upper bound	0.989	0.962		

Tabel 21. Frequentist Individual Test Reliability Statistics

Test	If test dropped		mean	sd
	Cronbach's α	Test-rest correlation		
RED1	0.984	0.903	7.740	2.230
RED2	0.978	0.945	7.380	2.108
RED3	0.974	0.970	7.720	2.138
RED4	0.977	0.951	7.880	2.191
RED5	0.975	0.964	7.800	2.204

1. Frequentist Individual Test Reliability Statistics

Tabel 22. Frequentist Individual Test Reliability Statistics

Test	If test dropped		mean	sd
	Cronbach's α	Test-rest correlation		
EFF1	0.948	0.835	7.260	2.211
MOT1	0.946	0.862	7.920	2.431
INT1	0.940	0.914	8.100	2.215
KNW1	0.953	0.795	6.860	2.347
CHA1	0.941	0.903	8.000	2.222
RED1	0.947	0.845	7.740	2.230

A. Cronbach's α

- Cronbach's Test EFF1 $0.948 > 0.80 - 1.00$ means the indicator is declared Very Reliable
- Cronbach's Test MOT1 $0.946 > 0.80 - 1.00$ means that the indicator is declared Very Reliable
- Cronbach's Test INT1 $0.940 > 0.80 - 1.00$ means the indicator is declared Very Reliable
- Cronbach's Test KNW1 $0.953 > 0.80 - 1.00$ means the indicator is declared Very Reliable
- Cronbach's Test CHA1 $0.941 > 0.80 - 1.00$ means the indicator is declared Very Reliable

- f. Cronbach's Test RED1 $0.947 > 0.80 - 1.00$ means the indicator is declared Very Reliable

B. Test-rest correlation

- a. The test-rest correlation EFF1 is $0.835 > 0.50$ which means that the indicator is declared Reliable
- b. The test-rest correlation MOT1 is $0.862 > 0.50$ which means that the indicator is declared Reliable
- c. Test-rest correlation INT1 is $0.914 > 0.50$, meaning that the indicator is declared Reliable
- d. Test-rest correlation KNW1 is $0.795 > 0.50$ meaning that the indicator is declared Reliable
- e. Test-rest correlation CHA1 is $0.903 > 0.50$ meaning that the indicator is declared Reliable
- f. Test-rest correlation RED1 is $0.845 > 0.50$ meaning that the indicator is declared Reliable

Tabel 23. Frequentist Scale Reliability Statistics

Estimate	Cronbach's α	Average intertest correlation mean	sd
Point estimate	0.954	0.779	7.647 0.486
95% CI lower bound	0.930	0.633	
95% CI upper bound	0.972	0.888	

The mean mean of the data test group was **7.647** with an **SD of 0.486**

Conclusion

From the data validation that has been carried out in this study, all indicators are declared Reliable Because the Test-rest correlation validation value is more than > 0.50 and Cronbach's validation value $> 0.80 - 1.00$ and the readiness of cadets to start entrepreneurship is influenced by the factors of interest, desire, motivation, character, and knowledge, where each factor has an interrelated correlation. to be a part in determining whether cadets are ready and interested in starting a business in the sense of a job seeker becoming a job maker

Suggestion

Based on research data, then suggested for future researchers to develop research on the approach contextual through different methods or comparing several methods.

Conflicts Of Interest Statement

The authors whose names are listed immediately below certify that they have NO affiliations with or involvement in any organization or entity with financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

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