The Mediating Role of Entrepreneurship Interest on the Effect of Entrepreneurship Education to Digital Startup Preparation in the Digital Age

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ABSTRACT

One of the problems in Indonesia is unemployment. The higher unemployment rate can certainly have a negative impact and cause poverty problems. In the digital age as it is today there is a great opportunity for students to start a business in the field of digital startup. The purpose of this research is to know the role of entrepreneurship interest as a mediation variable, on the effect of entrepreneurship education on digital startup preparation students. This research uses a quantitative approach with a causal descriptive research design. A sample of 140 students was taken using purposive random sampling techniques. Data is analyzed with descriptive analysis techniques and path analysis with the help of SPSS 24.0 and SEM AMOS 24 applications. The results showed entrepreneurship education had a direct effect on entrepreneurship interests and student's digital startup preparation, entrepreneurship interests had a direct effect on students' preparation digital startup, while entrepreneurship education had an indirect effect on student's digital startup preparation through entrepreneurship interests.

Keywords: entrepreneurship education, entrepreneurship interest, digital startup preparation, higher education, digital age

1. INTRODUCTION

One of the problems in Indonesia is unemployment. The higher unemployment rate can certainly have a negative impact and cause poverty problems. One of the contributors to the unemployment rate in Indonesia is a bachelor's degree. The number of graduates each year is always increasing, but getting a job is not comparable. Citing data from the Central Bureau of Statistics (BPS) of the Republic of Indonesia in 2018, in the last three semesters the number of undergraduate unemployed increased, namely, in February 2017 as much as 4.98% (349,098 people) from the total unemployment of 7.04 million people, 5.18% (364,672 people) of total unemployment of 7.01 million people, compared to 6.31% in February 2018 (433,497 people) out of a total unemployment of 6.87 million people [1].

The problem of high undergraduate unemployment in Indonesia is caused by the number of undergraduates when students are confused about what to do after graduating from college [2]. Students should be able to plan their careers for success. Looking at what is being done across the EU as countries included in the European Commission see entrepreneurship education as having a very important role in tackling youth unemployment [3]. Entrepreneurship is expected to overcome or at least reduce the amount of unemployment that exists. In the study of entrepreneurship interest from college graduates in Malaysia, it also highlights that in the digital age promoting startup entrepreneurship is one way to address the problem of job worthiness [4].

Drucker explained that entrepreneurship is the process of designing, launching and running new businesses, which play an important role in the development and commercialization of new technologies [5]. Through this process, creative ideas become useful innovations providing solutions (solving problems) for customers. Innovation, which refers to the process of translating an idea or invention into a product or service that creates value or that a customer will pay for, is essential for entrepreneurship in either an existing business or a new venture [6]. Entrepreneurship start-ups are also more innovative than existing businesses [7], [8]. Innovation requires entrepreneurship skills and innovation is the main feature of an entrepreneur.

Quality entrepreneurship education relies on an understanding of entrepreneurship competencies that drive entrepreneurship interests [9]. Interest is essential to understanding the process of adventure into a business and is considered the first step in starting a company [10]. Entrepreneurship interest is the main and strongest predictor of entrepreneurship behavior [11], [12]. In addition, entrepreneurship intent explains entrepreneurship and the process of becoming entrepreneurship leading to the formation of new businesses and job opportunities [13]. Entrepreneurship interests are the originating of entrepreneurship activities and formed through competence, nature, and personal interaction with the environment, entrepreneurship interests must be learned to better understand where the idea of starting a business comes from and how it comes true [4]. Various studies prove that quality entrepreneurship education effects students' entrepreneurship interests [14], [15] which will be followed by setting up a startup business in the digital age [4], [5], [9].

Department of Educational Administration, Faculty of Education, Universitas Negeri Malang (UM), has a major role in improving the quality of Indonesia's human resources. As the opinion of Abdelkarim [16] universities need to prepare graduates who can be hired, including with entrepreneurship skills, but they must also engage in society to reduce poverty or unemployment and create job opportunities through community-oriented training and can engage in research for entrepreneurship development. Improving the quality of human resources from UM civitas has been realized to be a major pillar that cannot be ignored [17]. One of the improved aspects of UM's current civitas is the ability of entrepreneurship.

As the successor of the nation of students is expected to be the focus in the future, therefore the understanding of entrepreneurship must be owned by the students. So, with his entrepreneurship understanding, they can create new jobs, not even increase the unemployment rate after graduating from higher education [18], [19]. Wherever possible students can think creatively and innovatively about the business opportunities available and dare to start a business. Based on the above exposure, research is needed on the role of entrepreneurship interests as mediation variables, the effect of entrepreneurship education on digital startup preparation of students.

2. METHOD

This research uses a quantitative approach with a causal descriptive research design. Descriptive designs are used to present entrepreneurship education levels, entrepreneurship interests, and digital startup preparation students, while causality designs are used to determine the effect of entrepreneurship education, on entrepreneurship interests and digital startup preparation students [20], [21]. Based on the literature review

researchers devised a theoretical framework model proposed in this study. The theoretical skeletal model in this study can be seen in Figure 1. The population of this study is student of Department of Educational Administration, Faculty of Education, UM. Purposive random sampling technique is used in sampling, with a total of 140 respondents.
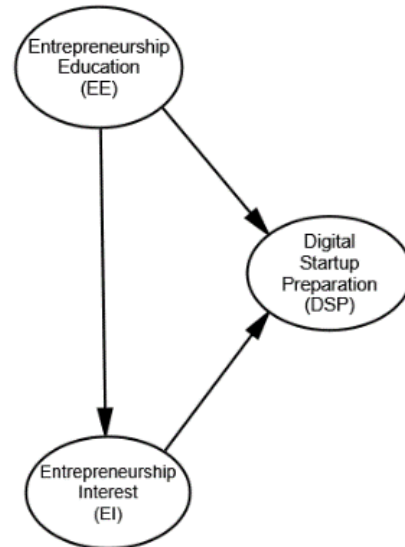

Figure 1 The Proposed Theoretical Model

Research data collection instruments using closed questionnaire via google form. The questionnaire was developed based on a theory that understands research variables [21], [22]. Good instruments must be valid as well as reliable [23]. The validity rate of the instrument statement grain is used Pearson Product Moment Correlation technique. The criteria item statement is declared valid if the value of the significance is < 0.05 [24]. Based on the validity test results, all items are declared valid. Reliability tests are performed using Cronbach's alpha, where the instrument is declared reliable when Cronbach's alpha value is $0.600 > 0,600$ [25]. Cronbach's alpha value of all research variable instruments > 0.600 in detail values Cronbach's alpha per variable i.e., (a) entrepreneurial education 0.907; (b) entrepreneurship interest 0.852; and (c) student's digital startup preparation 0.952.

3. RESULT

a. *Data Description*

The description of the data in this study was obtained through instruments submitted to respondents of 140 students. In detail based on Table 1 it can be explained that the level of entrepreneurship education given to students obtained means 34.22, the value is in the category very good. So, it can be concluded that the level of entrepreneurship education is seen from the curriculum, the quality of lecturers and learning facilities fall into the category very well. Based on Table 1 it can be explained that the level of entrepreneurship interest of students

obtained means 31.56, the value is in the category very well. Then it can be concluded that the level of entrepreneurship interest of students based on indicators of interest, desire and confidence belongs to the category very well. Based on Table 1 it can be explained that the level of digital startup preparation obtained means of 54.96 such values in the category is excellent. It can be concluded that the level of digital startup preparation is seen from solid and consistent team indicators, information search, investors, mentors, business roadmaps, digital marketing, technology savvy, and confidence fall into the category very well. In detail the frequency distribution, and mean of research variables can be seen in Table 1.

Table 1   Frequency Distribution and Mean Research Variables

Variable	Interval	Category	f	Mean	Note
Entrepreneurship Education	10-17	Very Not Good	0	34,22	Very Good
	18-25	Not Good	9		
	26-33	Good	47		
	34-41	Very Good	84		
Entrepreneurship Interest	9-15	Very Not Good	0	31,56	Very Good
	16-22	Not Good	2		
	23-29	Good	41		
	30-36	Very Good	97		
Digital Startup Preparation	16-27	Very Not Good	0	54,96	Very Good
	28-39	Not Good	6		
	40-51	Good	44		
	52-64	Very Good	90		
N: 140					

b. Normality and Outlier Test

Data is said to be distributed normally if the critical ratio skewness value is below + 2,58 [25]. Based on the normality test results in this study, the critical ratio (C.R) value for skewness and kurtosis of each indicator is no greater than + 2,58, so that normal distributed data can be inferred at the univariate level [26]. While the multivariate kurtosis line also shows a C.R value of 2,4310 (< + 2,58), can be concluded normal distributed data at multivariate level, then the data is worth using and can be used for further analysis.

To see the multivariate outlier is done by looking at the value of Malahanobis Distance. The value of Malahanobis Distance is compared to the chi-square value, if the value is Malahanobis Distance (> chi-square) means a multivariate outlier problem occurs [25]. Based on the provision stipulated in this study obtained a chi-square value of 51,349 and the largest value at Malahanobis Distance of 47,418, it can be concluded there is no problem multivariate outlier.

c. Evaluating the Measurement Model

The validity of the measurement model depends on establishing an acceptable goodness of fit level for the model, and finding specific evidence of construct validity. To evaluate the validity of the measurement model, a test of the validity of the construct is conducted, consisting of convergent and discrimination validity. The variables in the study were measured using 14 indicators.

The convergent validity of the model is evaluated through Confirmatory Factor Analysis (CFA) using AMOS 24. Indicators that have loading values > 0,5 included in the test [27], and AVE Size (Average Variance Extracted) required > 0,5. Reliability is assessed based on Composite Reliability (CR) each must exceed the (>0,70). Table 2 shows convergent validity and satisfactory reliability, due to the loading value factor, CR and AVE meet and significant. Goodness of fit indices based on Table 3, it can be seen that all indices are within the recommended criteria [25]–[27], are $\chi^2 = 51.349$; RMSEA = 0.049; GFI = 0.922; AGFI = 0.913; CMIN/DF = 1.579; TLI= 0.957; and CFI = 0.968.

Table 2   Results of the Measurement Model

Factor	Item Code	Loading	AVE	CR
Entrepreneurship Education (EE)	EE1	0.886	0.780	0.914
	EE2	0.897		
	EE3	0.867		
Entrepreneurship Interest (EI)	EI1	0.817	0.665	0.856
	EI2	0.749		
	EI3	0.875		
Students Digital Startup Preparation (DSP)	DSP1	0.822	0.721	0.954
	DSP2	0.872		
	DSP3	0.869		
	DSP4	0.907		
	DSP5	0.897		
	DSP6	0.772		
	DSP7	0.850		
	DSP8	0.796		
Note: N = 140, AVE = Average Variance Extracted, CR = Construct Reliability				

Table 3   The Fit Indices of The Model

Goodness of Fit Indices	Results of the Testing Model	Cut-Off Value	Decision
X² Chi Square	51,349	≤ 55,189	Good
Probability	0,061	≥ 0,050	Good
RMSEA	0,049	≤ 0,080	Good
GFI	0,922	≥ 0,900	Good
AGFI	0,913	≥ 0,900	Good
CMIN/DF	1,579	≤ 2,000	Good
TLI	0,957	≥ 0,950	Good
CFI	0,968	≥ 0,950	Good

d. Structural Model Interpretation

Based on the evaluation of the measurement model presented earlier, the next stage that must be done is the interpretation of the model. Figure 2 shows the results of the SEM test using the help of the AMOS 24 application. The results of the research hypothesis test can be seen in Table 4. The model needs to be interpreted to know the amount of direct, or indirect effect as summarized in Figure 2.

Table 4   Hypothesis Testing Results

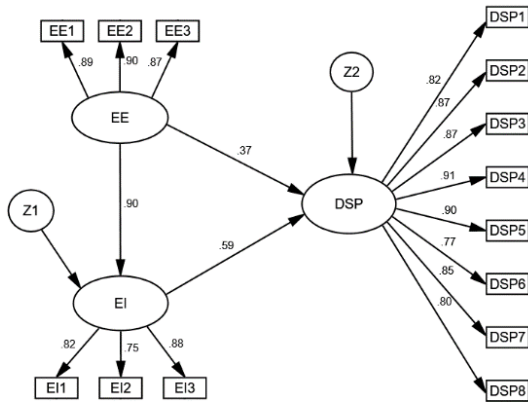| Variable	P *value*	Cut of Value	Decision
EE→ EI	0,000	0,050	H1 Accepted
EI → DSP	0,000	0,050	H2 Accepted
EE → DSP	0,000	0,050	H3 Accepted
EE → EI → DSP	0,000 (Sobel Test)	0,050	H4 Accepted

Figure 2 SEM Test Results

Table 5 Summary of Direct and Indirect Effects Between Research Variables

Variable	Effect		Total
	Direct	Indirect	
EE → EI	0,897	-	0,897
EI → DSP	0,593	-	0,593
EE → DSP	0,370	0.532	0,902

Based on Table 4, Table 5, and Figure 2, interpretation of the results of the analysis as follows:

1) Entrepreneurship education (EE) has a direct effect on entrepreneurship interest (EI) because the p value is 0.000 (<0.050), meaning statistically the higher the level of entrepreneurship education, the higher the interest of entrepreneurship students, with a coefficient of 0.897 lines.

2) Entrepreneurship interest (EI) has a direct effect on digital startup preparation (DSP), because the p value is 0.000 (< 0.050), meaning statistically higher interest in entrepreneurship students, the more students increase digital startup preparation, with a coefficient of 0.593 lines.

3) Entrepreneurship education (EE) has a direct effect on digital startup preparation (DSP), because the p value is 0.000 (< 0.050), meaning the higher the level of entrepreneurship education, the more students increase digital startup preparation, with a coefficient of 0.370 lines.

4) Entrepreneurship education (EE) has an indirect effect on digital startup preparation (DSP), through entrepreneurship interest (EI), because based on the results of test calculations, the p value is 0.000 (< 0.050), with a coefficient of 0.532, while the total effect of entrepreneurship education on student's digital startup preparation with a large coefficient of 0.902 line

4. DISCUSSION

Fostering entrepreneurship through education and training at the university level has recently become part of the national strategic agenda in many countries.

Perceived educational support has been recognized as determining entrepreneurship interests. Some studies emphasize the positive effect of entrepreneurship education on students' entrepreneurship interests in short-term and long-term perspectives [28]. A similar study conducted in Malaysia found that the proper application of entrepreneurship education will affect the interest in becoming an entrepreneur [29].

Based on the results of entrepreneurship education research has a direct effect on student's digital startup preparation. Entrepreneurship knowledge can be obtained from entrepreneurship education which in universities is poured into entrepreneurship education courses, which are relevant to digital development [30]. Development of preparation in building a business in the field of digital startups that is successfully recognized as part of the role of universities [31]. Entrepreneurship education, which is education that applies principles and methodologies towards the establishment of life skills [32]. Providing entrepreneurship-related experience by engaging students in learning activities, developing business plans, and the practice of running a business given to students, will increase their interest in entrepreneurship and prepare for a career of entrepreneurship in the digital field in the future.

This research shows that entrepreneurship interests have a direct effect on digital startup preparation students. Entrepreneurship is done by running your own business. In 2014, the university's findings suggest that students' interest in entrepreneurship affects student readiness in digital entrepreneurship [4], [33]. Entrepreneurship interests owned by students, can be followed up into the preparation of his career as an entrepreneur in the field of digital that will be applied at the time of graduation [34]. This is because business opportunities are increasingly wide open with the development of information technology in the digital age, but of course bring its own challenges.

Previous research has shown that entrepreneurship education is an efficient method of equipping students with the necessary knowledge of entrepreneurship [29]. Entrepreneurship education also effects students' career choices [35] to survive in the increasingly intensive business world in the era of Industrial Revolution 4.0 as it is today, universities are required to play a key role in promoting entrepreneurship. Thus, based on the results of the research, entrepreneurship education variables have an indirect effect on student's digital startup preparation through entrepreneurship interest variables. Research conducted Hartsenko and Venesaar [36] revealed that students in entrepreneurship education through involvement in entrepreneurship education programs are more likely to start their business immediately after study. It is important that its primary education system at the university level offers support in enabling students to gain knowledge and entrepreneurship experience and to

create favorable pre-conditions to foster entrepreneurship interests and student's digital startup preparation. Measures in building a startup business in the field of digital namely: (a) forming a solid and consistent team, (b) information search, (c) the absence of investors, (d) the absence of ideas and mentors, (e) creating a business roadmap, (f) relying on digital marketing, and (g) confidence [37].

5. CONCLUSION

One way to address this problem of unemployment is to promote entrepreneurship among students and or fresh graduates. Based on the results of research showing that entrepreneurship education has a direct effect on entrepreneurship interests and student's digital startup preparation, entrepreneurship interests have a direct effect on students' preparation digital startup, while entrepreneurship education has an indirect effect on student's digital startup preparation through entrepreneurship interests. Therefore, policymakers in this case the government can use the findings of this study to strengthen existing policies and programs and formulate new one to support graduates who are ready to develop a business in the field of digital startups.

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