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DOES ENTREPRENEURSHIP EDUCATION MATTER FOR ISLAMIC HIGHER EDUCATION STUDENTS' ENTREPRENEURIAL READINESS?

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ABSTRACT

This research examines the empirical linkages among entrepreneurship education, entrepreneurial mindset, entrepreneurial skill, and entrepreneurial readiness of Islamic higher education students in Indonesia. This research also highlights the intervening role of an entrepreneurial mindset and entrepreneurial skills in the linkages between entrepreneurship education and entrepreneurial readiness. This study is based on social cognitive theory. The article is a quantitative research using a survey method. Data were collected using an online questionnaire with a sample of 310 Islamic college students in Indonesia. The data were analyzed using PLS-SEM to identify hypotheses. The results indicate that entrepreneurship education improves the entrepreneurial mindset and entrepreneurial skills. Surprisingly, entrepreneurship education has no direct effect on entrepreneurial readiness. Although entrepreneurship education indirectly affects entrepreneurial readiness, intervened by an entrepreneurial mindset and entrepreneurship skills. The results showed that the entrepreneurial mindset and entrepreneurship skills determine entrepreneurial readiness. The findings of this study are essential for Islamic higher education to provide entrepreneurship education that aims to develop an entrepreneurial mindset and improve entrepreneurship skills.

JEL : L26, M10, M53.

Keywords : *social cognitive theory, entrepreneurial mindset, entrepreneurship skills.*

1. INTRODUCTION

The essential economic problem facing the Indonesian government today is unemployment. Data from the National Labor Force Survey shows that the percentage of unemployment for diploma and undergraduate graduates is 6.68% (2015), 5.15% (2016), 5.57% (2017), 5.91% (2018), 5.71% (2019), and 7.51% (2020) (Badan Pusat Statistik, 2021). This percentage illustrates that the number of unemployed higher education graduates tends to increase from 2015-to 2020. This shows the importance of entrepreneurship in overcoming the problem of unemployment for higher education graduates.

Global Entrepreneurship Monitor (GEM) report 2019/2020 described that Indonesia was in the eighth position in the world for the acquisition of the National Entrepreneurship Context Index (CENI) (Bosma, Hill, Ionescu-Somers, Kelley, Levie, & Tarnawa, 2020). The NECI value reflects that the business environment in Indonesia is quite good. Although the business environment in Indonesia is quite good, the reality of Muslims nowadays cannot become market leaders in business. The fact is that only one of the ten wealthiest people in Indonesia is a Muslim (Forbes, 2021). Even though the total Muslim population in Indonesia reaches 86.69 % (Kementerian Agama RI, 2022), suppose it is related to unemployment for higher education graduates. Muslim entrepreneurs are still unable to become market leaders in Indonesia. In that case, it can be seen that Muslim students have not been successful in entrepreneurship.

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Prior studies state that entrepreneurial intentions influence entrepreneurial behavior (Joensuu-Salo, Viljamaa, & Varamäki, 2020; Neneh, 2019; Tung, Hung, Phuong, Loan, & Chong, 2020). Intention shall predict behavior accurately; however, entrepreneurial behavior can emerge without intention in some cases (Kautonen, van Gelderen, & Tornikoski, 2013). Another finding states that some students with weak intentions still want to become entrepreneurs (Varamaki, Joensuu, Tornikoski, & Viljamaa, 2015). If we refer to the previous studies, the linkages between intention and behavior are still ambiguous. We need further exploration of the students' preparation to become entrepreneurs.

Based on Social Cognitive Theory (SCT), behavior results from the interaction between personal variables (cognitive) and environmental variables (Bandura, 1986). In the context of entrepreneurial behavior, Winkler stated that based on Bandura's triadic reciprocality model, there is a reciprocal influence between entrepreneurship education as an environmental variable on student cognition and in the wake of entrepreneurial behavior. Entrepreneurial behavior can be in the form of awareness of entrepreneurship, nascent entrepreneur behavior, introducing and exploiting opportunities, and starting a business. At the same time, personal variables can be self-efficacy, intention, and self-regulation in entrepreneurship (Winkler, 2014). Recent findings show that the construct of an entrepreneurial mindset is included in the personal variable (Cui, Sun, & Bell, 2021). Furthermore, environmental variables can be in the curriculum, educational methods, and non-academic environments (Winkler, 2014). In entrepreneurship, environmental variables are manifested by entrepreneurship education in higher education.

There are three aspects to measuring entrepreneurial readiness as a manifestation of behavior variables such as sociological, psychological, business management, and entrepreneurship (Ruiz, Soriano, & Coduras, 2016). It means that an entrepreneurial mindset is not sufficient to capture entrepreneurial readiness. Meanwhile, behavioral variables are determined by cognitive and environmental variables in social cognitive theory. It is essential to add entrepreneurial skills to the entrepreneurial readiness model to understand management business and entrepreneurship aspects.

The unique entrepreneurial skills described in previous research are related to the entrepreneurial skills theory by Lazear. The entrepreneurial skills theory developed by Lazear is usually known as the Jack-of-All-Trades theory. Lazear mentions the skills prerequisites for an entrepreneur (Lazear, 2005). Empirical testing of the theory suggests that higher education increases the chances of starting a business (Ito & Watanabe, 2020; Kurczewska & Mackiewicz, 2020; Mackiewicz & Kurczewska, 2020). In addition, entrepreneurs with higher education intend to have sustainable businesses.

This research was conducted based on three main reasons. First, to overcome the increasing unemployment among higher education graduates and the lack of success of Muslim entrepreneurs, it is important to analyze the entrepreneurial readiness of Islamic higher education students. Second, to overcome the ambiguity of the relationship between personal and behavioral variables. Previous research has been in the form of a relationship between intentions and behavior. This study uses the construct of an entrepreneurial mindset as a construct of personal variables and entrepreneurial readiness as a behavioral variable. Third, to overcome the weakness of the triadic reciprocality model in explaining entrepreneurial readiness. The research contributes to the development of the triadic reciprocality model from social cognitive theory by adding

entrepreneurial skills variables derived from the Jack-of-All-Trades theory. The model of student entrepreneurial readiness at Islamic higher education developed in this study explains what factors can increase student entrepreneurship readiness, either directly or indirectly.

2. LITERATURE REVIEW

2.1. Social Cognitive Theory

Social cognitive theory (SCT) was developed by Albert Bandura and stated that human function is a reciprocal relationship between behavior, environmental variables, and personal (cognition) variables. The interaction of the three is called the model of reciprocity between the three variables (triadic reciprocality) (Bandura, 1986). These three variables influence each other and can vary between activities, individuals, and environments. Based on this model, individuals proactively shape the environment, and vice versa. Then, individuals also function as products and producers of their environment (Bandura, 1982).

Personal variables are mediator variables between the entrepreneurial environment and the entrepreneurial behavior (Luthans, Stajkovic & Ibrayeva, 2000). On the other hand, the interaction between personal, process, and environmental variables has been stressed in entrepreneurial research describing the process of creating new businesses (Gartner, 1985). In addition, in the context of research on entrepreneurial behavior, especially student entrepreneurial behavior, the interaction of these three variables has not received special attention. This is because, in the entrepreneurship education context, research tends to be social-cognitive oriented but mostly ignores the influence of environmental factors. Meanwhile, other research focuses on learning to support entrepreneurship programs. A thorough investigation of how environmental variables (eg: curriculum, pedagogical methods, non-academic learning environment) affect student cognition/personality (eg: self-efficacy, intention, self-regulation of entrepreneurship) and entrepreneurial behavior (eg: entrepreneurial awareness, new entrepreneur behavior, recognition, and exploitation of opportunities, business creation) is needed so that the complex entrepreneurship learning process model is easy to understand (Winkler, 2014).

2.2. Entrepreneurship Education, Entrepreneurial Mindset, Entrepreneurship Skill, and Entrepreneurial Readiness

Discussion about the definition, objectives, and framework of entrepreneurship education is a challenge in itself, considering that this study is very broad and dynamic as is the study of entrepreneurship itself. Entrepreneurship education designates an educational program or an educational way for improving entrepreneurial attitudes and skills (Fayolle, Gailly, & Lassas-Clerc, 2006). With entrepreneurship education, knowledge and insight in identifying opportunities, commercializing ideas, compiling resources to face risks, and starting a business were developed. Entrepreneurship education also includes knowledge in the areas of information systems, management, marketing, and finance (Jones & English, 2004). Entrepreneurship education is also a series of training, whether in the education system, which aims to expand intentions through the knowledge, desire, and feasibility of students to carry out entrepreneurial behavior (Liñán, Sevilla, De, Economía, & Rodríguez-cohard, 2015).

Entrepreneurship education as an environmental variable based on social cognitive theory has a positive effect on cognitive variables, manifested as an entrepreneurial mindset in this study. Entrepreneurship education might accelerate the students' entrepreneurial mindset (Mukhtar,

Wardana, Wibowo, & Narmaditya, 2021). Another empirical research state that entrepreneurship education escalates entrepreneurial mindsets (Handayati, Wulandari, Soetjipto, Wibowo, & Narmaditya, 2020; Saptono, Wibowo, Narmaditya, Karyaningsih & Yanto, 2020; Solesvik, Westhead, Matlay & Parsyak, 2013; Wardana, Narmaditya, Wibowo, Mahendra, Wibowo, Harwida & Rohman, 2020). Additionally, entrepreneurship education is enhancing the entrepreneurial mindset of the student (Dewi, Nurfajar, & Dardiri, 2018).

Entrepreneurship education might improve the entrepreneurial mindset with a design thinking approach (Daniel, 2016). The entrepreneurial mindset manifested by awareness of opportunities, accepting risk, tolerance for uncertainty, and optimism will be upgraded with entrepreneurship education (Cui et al., 2021). Entrepreneurship education programs can improve the entrepreneurial mindset of engineering students in the form of extracurricular activities (De Hoyos-Ruperto et al., 2017). Entrepreneurship education can increase awareness of business opportunities (Othman, Othman & Juhdi, 2020) and tolerance for uncertainty (Guerrero, Urbano & Gajón, 2020), which are dimensions of the entrepreneurial mindset.

These prior empirical results allowed us to formulate the following research hypotheses:

H_1: Entrepreneurship education improves the entrepreneurial mindset of Islamic higher education students

H_2: The entrepreneurial mindset improves the entrepreneurial readiness of Islamic higher education students

The Jack-of-All-Trades theory reveals that people who have balanced skills in various fields are more appropriate to become an entrepreneur (Lazear, 2004). Skills can be obtained from work experience, achievements (both formal and informal), and talents. Legal achievements can be acquired from attending the entrepreneurship education (Aldén, Hammarstedt & Neuman, 2017). The better the entrepreneurship education, the more students' entrepreneurial skills (Fayolle, 2018). Entrepreneurship education at the universities encourages the formation of student entrepreneurial skills (Din, Anuar & Usman, 2016). Some students who receive entrepreneurship training have entrepreneurial skills and knowledge (Dzisi, Odoom & Gligah, 2018). Online business simulation as a form of entrepreneurship education can improve students' essential entrepreneurial skills (Tawil, Hassan, Ramlee & K-Batcha, 2015). An integrated entrepreneurship curriculum can enable students to develop strategic and managerial skills and entrepreneurial abilities (Towers, Santoso, Sulkowski & Jameson, 2020).

Referring to the Jack-of-All-Trades theory, someone who has more diverse skills is better equipped to become an entrepreneur. Someone with more balanced skills is more appropriate to become an entrepreneur (Aldén et al., 2017). Entrepreneurial skills can encourage the growth of students' start-up businesses (Shirokova, Osiyevskyy & Bogatyreva, 2016) and entrepreneurial practices (Ekpe, Razak, Ismail & Abdullah, 2015).

These prior empirical results allowed us to formulate the following research hypotheses:

H_3: Entrepreneurship education improves the entrepreneurship skills of Islamic higher education students

H_4: Entrepreneurship skills improve the entrepreneurial readiness of Islamic higher education students

Jones and English explain the process of establishing knowledge and insight in identifying opportunities, commercializing ideas, developing resources to mitigate risks, and starting a business as a part of the entrepreneurship education (Jones & English, 2004). Kyro mentions that entrepreneurship education increases attitudes and behavior toward the student initiative, innovation, and competence to start a new business (Kyro, 2008). Entrepreneurship education has also increased the inclination toward a new business (Byabashaija & Katono, 2011). Shirokova et al. (2016) also revealed that entrepreneurship education has a positive effect on start-up activities carried out by students. Based on this explanation, it can be concluded that entrepreneurship education has a positive effect on entrepreneurial readiness.

The research hypotheses built in this study are:

H_5: Entrepreneurship education improves the entrepreneurial readiness of Islamic higher education students

Saptono et al. (2020) explained that the entrepreneurial mindset mediates the relationship between knowledge and entrepreneurial preparation. In addition, Mukhtar et al. (2021), Wardana, Narmaditya, Wibowo, Fitriana, Saraswati & Indriani (2021), and Handayati et al. (2020) stated that the entrepreneurial mindset also mediates the relationship between entrepreneurship education and entrepreneurial intentions. As a result, there is an assumption that the entrepreneurial mindset can also mediate the relationship between entrepreneurship education and entrepreneurial readiness. Thus, this study examines the indirect effect between entrepreneurship education and entrepreneurial readiness with an entrepreneurial mindset as a mediator variable.

Based on the Jack-of-All-Trades theory, entrepreneurial skills can be formed from entrepreneurship education activities. In addition, the theory also reveals that someone who has more diverse skills is better prepared to become an entrepreneur (Lazear, 2004). The empirical findings of Din et al. (2016) stated that entrepreneurship education and training in universities encourage the formation of student entrepreneurship skills. On the other hand, Saptono et al. (2020) explained that entrepreneurship education is an effective way to prepare for entrepreneurship. Therefore, it is suspected that increasing entrepreneurial readiness can be done through entrepreneurship education that is oriented towards increasing entrepreneurial skills.

The research hypotheses built in this study are:

H_6: Entrepreneurial mindset mediates between entrepreneurship education and entrepreneurial readiness of Islamic higher education students

H_7: Entrepreneurship skills mediate between entrepreneurship education and entrepreneurial readiness of Islamic higher education students

2.3. Research Framework

According to the theory and prior research, it can be concluded that entrepreneurship education improves entrepreneurial readiness. In addition, conceptually, the entrepreneurial mindset and entrepreneurial skills intervene the linkages between entrepreneurship education and entrepreneurial readiness. Therefore, this study tries to conduct empirical research to strengthen social cognitive theory and entrepreneurial skills theory by using studies on Islamic higher education students. The research framework in this study is shown in Figure 1.

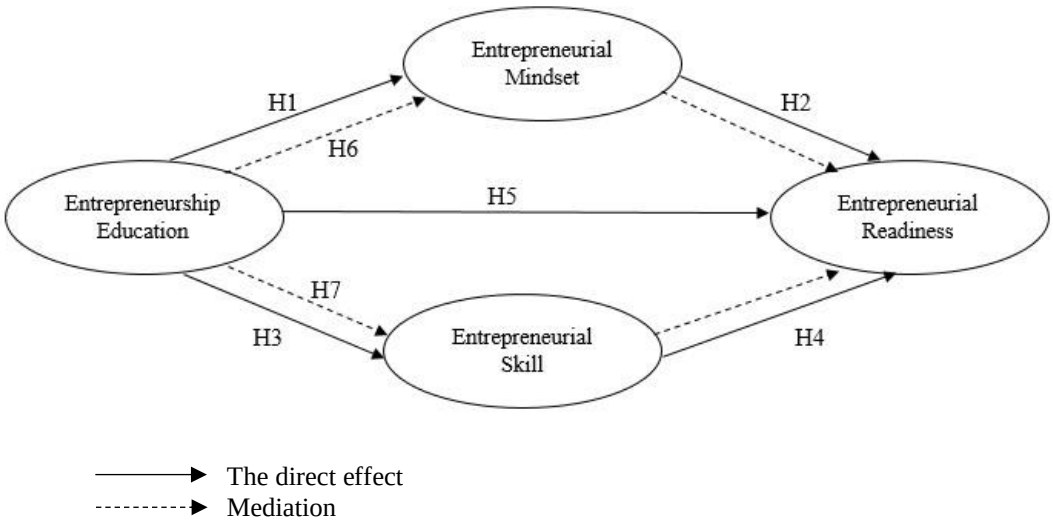


Figure 1. The research model of the entrepreneurial readiness antecedents

3. RESEARCH METHODS

This research uses a quantitative approach with a survey method. This research approach's advantage is understanding how entrepreneurship education, entrepreneurial mindset, and skills affect entrepreneurial readiness.

The population in this study were students of Islamic higher education in Indonesia who had participated in entrepreneurial activities. The selection of Islamic religious college students is made because religious colleges have encouraged entrepreneurial activities among students. However, there have been no student creativity program activities specifically for Islamic higher education students. In addition, there is no available empirical data explaining the role of Islamic higher education in creating national entrepreneurial forces.

Of the 527 respondents who filled out the online questionnaire, the research sample was 310 respondents who required the criteria. Nearly 71% of respondents came from Islamic higher education on Sumatra Island. The rest came from Islamic higher education on the Kalimantan, Java, Sulawesi, and Maluku islands. Almost 68% of respondents are students from primary at the Faculty of Islamic Economics and Business. In contrast, others came from the Tarbiyah Faculty, the Da'wah Faculty, and the Sharia Faculty. Respondents who have attended entrepreneurship courses are 59%. The rest participated in entrepreneurial activities in seminars, training, business plan and competitions, business exhibitions, and internships in the industry.

The questionnaire designed to measure entrepreneurial readiness was adapted from Coduras, Saiz-Alvarez & Ruiz (2016) and Ruiz et al. (2016). Meanwhile, measuring entrepreneurial skills was adapted from Olugbola (2017) and Barringer & Ireland (2016). The entrepreneurial mindset questionnaire was adapted from Rodriguez & Lieber (2020) and Cui et al. (2021). The entrepreneurship education questionnaire was adapted from Fayolle et al. (2006), Linan (2004), Fayolle (2000), and Johannisson (1991). A Likert scale measured the instrument in this study. Assessment in this study was carried out using the agree-disagree scale with five categories of answers where one indicates strongly disagree and five strongly agree.

The proposed construct implements structural equation modeling (SEM). SEM provides wide analytical tools to assess path and factor analysis while ensuring validity and reliability for

internal consistency. This study uses the partial least square-SEM (PLS-SEM) method because the purpose of this research was to identify the main determinant variable or predict a particular construct. Sample size and specifications of model for infrequent research are often problems with SEM, whereas PLS can undertake these problems delicately (Hair, Ringle & Sarstedt, 2011). This research is an exploratory analysis where PLS is suitable for analyzing models and testing hypotheses.

The data in this study were processed with Warp PLS 7. The estimation of the PLS-SEM model was conducted to obtain the results of the measurement and structural model with a variant-based algorithm. The algorithm estimates path coefficients and other parameters by maximizing the variance that endogenous variables can explain. Evaluation of the measurement model was carried out with internal consistency reliability, convergent validity, and discriminant validity. Meanwhile, the structural model evaluation is conducted by evaluating the problem of collinearity (VIF), assessing the significance and relevance of the structural model relationship (coefficient and p-value), assessing the coefficient of determination (R^2), assessing the effect size (f^2), and assessing predictive relevance (Q^2) Hair, Hult, Ringle & Sarstedt (2017).

4. RESULTS AND DISCUSSIONS

4.1. Findings

The research finding explains the evaluation of the measurement model, the assessment of the structural model, and the discussion of the research findings. Detailed results and discussion will be presented as follows.

4.2. The Assessment of Outer Model

Measurement model evaluation is conducted with three components, namely internal consistency reliability, convergent validity, and discriminant validity. Information about the results of the outer model assessment is described in Table 1. All variables, namely entrepreneurship education, entrepreneurial mindset, entrepreneurial skills, and entrepreneurial readiness, have composite reliability values of 0.951, 0.937, 0.959, and 0.962 (> 0.6). It is imply that these variables have complied with the internal consistency reliability criteria (Chin, Azali & Masih, 2009).

Convergent validity testing in this study was conducted by outer loading and Average Variance Extracted (AVE). In this research, outer loading values for entrepreneurship education variables (17 items), entrepreneurial mindset (15 things), entrepreneurial skills (12 items), and entrepreneurial readiness (23 items) ranged from 0.617 to 0.853. Even though the requirement outer loading should be >0.7, in some cases where a new questionnaire was developed, a score of 0.4-0.7 should still be considered to be maintained (Hair et al., 2017). The AVE values for the variables of entrepreneurship education, entrepreneurial mindset, entrepreneurial skills, and entrepreneurial readiness are 0.536, 0.501, 0.664, and 0.526 (>0.5). Based on the outer loading and AVE criteria, all variables in this study have met the requirements for convergent validity.

Table 1. The outer model measurement

Variable	Codes	Loading	CR	AVE
Entrepreneurship education	E.E-1	0.660	0.951	0.536
	E.E-2	0.642		
	E.E-3	0.675		
	E.E-4	0.736		
	E.E-5	0.724		
	E.E-6	0.780		
	E.E-7	0.791		
	E.E-8	0.785		
	E.E-9	0.819		
	E.E-10	0.762		
	E.E-11	0.798		
	E.E-12	0.794		
	E.E-13	0.739		
	E.E-14	0.735		
	E.E-15	0.699		
	E.E-16	0.624		
	E.E-17	0.639		
Entrepreneurial mindset	E.M-1	0.665	0.937	0.501
	E.M-2	0.775		
	E.M-3	0.642		
	E.M-4	0.710		
	E.M-5	0.627		
	E.M-6	0.672		
	E.M-7	0.636		
	E.M-8	0.724		
	E.M-9	0.736		
	E.M-10	0.751		
	E.M-11	0.748		
	E.M-12	0.760		
	E.M-13	0.732		
	E.M-14	0.683		
	E.M-15	0.732		
Entrepreneurial skills	E.S-1	0.735	0.959	0.664
	E.S-2	0.805		
	E.S-3	0.814		
	E.S-4	0.850		
	E.S-5	0.778		
	E.S-6	0.807		
	E.S-7	0.853		
	E.S-8	0.808		
	E.S-9	0.803		
	E.S-10	0.834		
	E.S-11	0.833		
	E.S-12	0.848		
Entrepreneurial readiness	E.R-1	0.617	0.962	0.526
	E.R-2	0.653		
	E.R-3	0.720		
	E.R-4	0.652		
	E.R-5	0.728		
	E.R-6	0.710		
	E.R-7	0.633		
	E.R-8	0.693		
	E.R-9	0.677		
	E.R-10	0.742		
	E.R-11	0.685		

	E.R-12	0.739
	E.R-13	0.770
	E.R-14	0.821
	E.R-15	0.811
	E.R-16	0.692
	E.R-17	0.706
	E.R-18	0.734
	E.R-19	0.827
	E.R-20	0.704
	E.R-21	0.774
	E.R-22	0.758
	E.R-23	0.784

The discriminant validity test in this study used two measurements, namely Fornell-Larcker and heterotrait-monotrait ratio (HTMT). Based on the Fornell-Larcker criteria, if the AVE root of each construct is greater than its correlation to other constructs, then the construct meets the requirements of discriminant validity (Hair et al., 2017). The AVE root values for the constructs of entrepreneurship education, entrepreneurial mindset, entrepreneurial skills, and entrepreneurship readiness are shown on the diagonal in bold in Table 2. Because the AVE root value for each construct is higher on the diagonal element than the correlation between constructs on the non-diagonal details, all constructs in this study have met the discriminant validity criteria.

Table 2. Fornell-Larcker criterion

	E.E	**E.M**	**E.S**	**E.R**
E.E	**0.732**			
E.M	0.717	**0.708**		
E.S	0.476	0.630	**0.815**	
E.R	0.400	0.551	0.795	**0.725**

Source: output of warp PLS 7

Based on the HTMT ratio, a construct is said to meet discriminant validity criteria if the HTMT ratio is less than 0.9 (HTMT ratio <0.9) (Henseler, Ringle & Sarstedt, 2015). According to Table 3, the HTMT ratio value for all constructs in this study is less than 0.9. Based on the HTMT ratio criteria, the constructs in this study have met the discriminant validity criteria.

Table 3. Heterotrait-Monotrait Ratio

	E.E	**E.M**	**E.S**	**E.R**
E.E				
E.M	0.767			
E.S	0.504	0.673		
E.R	0.423	0.583	0.828	

4.3. The Assessment of Inner Model

We compute the assessment of the inner model for the structural model after estimating the assessment of the outer model. The internal model review is carried out in five stages, which includes testing of collinearity, path coefficient, R-Square level, effect size, and relevant predictions.

The collinearity test looked at the total collinearity VIF value resulting from the full colline-arity test, namely vertical and lateral multicollinearity. Lateral collinearity can test whether there is a common method bias. If the full collinearity VIF value is less than 5, the model is independent of vertical, lateral collinearity, and common method bias problems (Hair, Ringle & Sarstedt, 2013). According to previous calculations, all the variables have a VIF coefficient of

2.064-3.182 (<5), so this construct has no collinearity. Thus, all indicators of tested constructs are valid.

The coefficient determination (R^2) examination aims to determine the predictive power of the endogenous latent variable. In short, the R^2 value indicates the model's predictive accuracy. Based on the R^2 rule, the importance of 0.75, 0.50, and 0.25 reveal that the model is robust, medium, and weak (Hair et al., 2017). The R^2 of the entrepreneurial mindset variable is 0.523 with a medium predictive level. It is indicated that the entrepreneurial education variable can explain 52.3 percent of the entrepreneurial mindset variant. Furthermore, the R^2 of the entrepreneurship skills variable is 0.237 at a weak predictive level. It is indicated that the entrepreneurial education variable can explain 23.7 percent of the variation in entrepreneurship skills. While the R^2 of the entrepreneurial readiness variable is 0.654 with a medium predictive level. It is indicated that 65.4 percent of the variation in entrepreneurial readiness can be explained by the variables of entrepreneurship education, entrepreneurial mindset, and entrepreneurship skills.

The effect size (f^2) test aims to examine the change in R^2 value when a specific exogenous construct is removed from the model (Hair et al., 2013). The criteria of effect size are 0.02 (small), 0.15 (medium, and 0.35 (large). The previous estimation shows that the f^2 of entrepreneurship education on the entrepreneurial mindset and entrepreneurship skills on entrepreneurial readiness is 0.523 and 0.590. It indicates a large effect size. The f^2 of entrepreneurship education on entrepreneurship skills is 0.237, meaning a moderate effect size. While, the f^2 value of entrepreneurship education on entrepreneurial readiness and entrepreneurial mindset on entrepreneurial enthusiasm is 0.009 and 0.056, which indicates a small effect size.

The predictive relevance (Q^2) test determines the degree of value that the model pays attention to and the estimated parameters. Q^2 score > 0 (zero) indicates that the model has an excellent predictive relevance (Hair et al., 2017). Q^2 scores for the variables of the entrepreneurial mindset, entrepreneurial skills, and entrepreneurial readiness are 0.523, 0.237, and 0.639 (>0), respectively, which illustrates that this research model has a predictive relevance value.

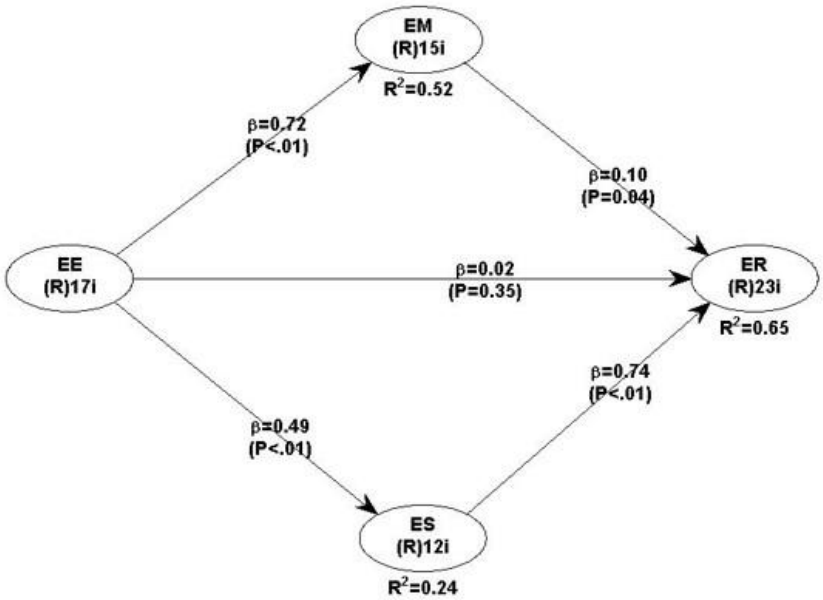
Table 4. Hypothesis Testing

	Relationship	Coefficient	P-Value	Decision
H_1	EE ➔ EM	0.723	<0.001	Significant
H_2	EM ➔ ER	0.099	0.039	Significant
H_3	EE ➔ ES	0.487	<0.001	Significant
H_4	ES ➔ ER	0.741	<0.001	Significant
H_5	EE ➔ ER	0.022	0.350	Insignificant
H_6	EE ➔ EM ➔ ER	0.071	<0.001	Significant
H_7	EE ➔ ES ➔ ER	0.361	<0.001	Significant

Source: output of warp PLS 7

The path coefficient aims to evaluate the structural model. The coefficients and p-values of the seven hypotheses in this study are shown in Table 4 and Figure 2. The direct linkages between entrepreneurship education and entrepreneurial mindset variables has a coefficient of 0.723 and p-value <0.05. It is indicated that entrepreneurship education has a positive effect on the entrepreneurial mindset. The relationship between entrepreneurial mindset and entrepreneurial readiness has a coefficient of 0.099 with a p-value of 0.039 <0.05. This value indicated that an entrepreneurial mindset improves entrepreneurial readiness. The relationship between entrepreneurship education and entrepreneurship skills has a coefficient value of 0.478 and p-value <0.05. It is indicated that entrepreneurship education improves entrepreneurial skills. The

coefficient value between entrepreneurship skills and entrepreneurial readiness is 0.741 with a p-value <0.05. This value indicated that entrepreneurship skills improve entrepreneurial readiness.



Note: EE-Entrepreneurship Education, EM-Entrepreneurial Mindset, ES-Entrepreneurial Skill, ER-Entrepreneurial Readiness

Figure 2. Model Path Assessment

The direct connection between entrepreneurship education and entrepreneurship readiness has a p-value of 0.350 > 0.05. It is indicated that entrepreneurship education does not affect entrepreneurial readiness. As for the indirect relationship, based on the p-value of each path between entrepreneurship education and entrepreneurial mindset, then entrepreneurial mindset and entrepreneurial readiness, the entrepreneurial mindset intervenes in the linkages between entrepreneurship education and entrepreneurial readiness. Another indirect linkages is the intervening effect of entrepreneurship skills on the relationship between entrepreneurship education and entrepreneurial readiness. The results of the two pathways between entrepreneurship education and entrepreneurship skills, then entrepreneurship skills and entrepreneurial readiness, indicate that entrepreneurship skills intervene in the linkages between entrepreneurship education and entrepreneurial readiness.

4.2. Discussion

The triadic reciprocality model explains that environmental variables play an essential role in forming the cognition (Bandura, 1986). In this study, environmental variables are described in entrepreneurship education, while cognition variables are described in the construct of the entrepreneurial mindset. Entrepreneurship education in this study is indicated by the type, objectives, curriculum/content, methods, and evaluations. While the entrepreneurial mindset in this study is characterized by critical thinking and problem solving, communication and collaboration, creativity and innovation, awareness of opportunities, the tendency to take risks, tolerance for uncertainty, optimism, and future orientation. The entrepreneurial mindset is not a fact, and a skill that must be learned but is a way of thinking that reflects the deep cognitive structure of the individual (Naumann, 2017). However, one of the goals of entrepreneurship education at Islamic

higher education, which was considered very good by the respondents of this study, was to build an entrepreneurial mindset. These results indicate that the entrepreneurial mindset can be improved with entrepreneurship education.

Entrepreneurship education increase awareness of business opportunities (Othman et al., 2020) and tolerance for uncertainty, which are dimensions of the entrepreneurial mindset (Guerrero et al., 2020). In addition, entrepreneurship education improves the entrepreneurial mindset based on indicators of opportunity recognition, critical thinking, communication and collaboration, and problem-solving (Rodriguez & Lieber, 2020). This is because, through entrepreneurship education, students can increase their confidence in facing their career choices.

Entrepreneurship education can be in the form of curricular and extracurricular activities. Entrepreneurship education in curricular activities has a weaker effect on the entrepreneurial mindset than in extracurricular activities (Cui et al., 2021). The entrepreneurial mindset is indicated by awareness of opportunities, accepting risk, tolerance for uncertainty, and optimism. Entrepreneurship education programs in the form of extracurricular activities have increased their entrepreneurial mindset (De Hoyos-Ruperto et al., 2017). Extracurricular activities play an essential role in the success of entrepreneurship education because they are carried out in informal situations but are still supported by institutional resources (Laukkanen, 2000).

The results of this study propose that entrepreneurship education can improve the mindset of Islamic higher education students. This study empirically proves Winkler's conceptual paper, which states that entrepreneurship education as an environmental variable affects the entrepreneurial mindset, which is a cognitive variable in the triadic reciprocality model (Winkler, 2014). This study also confirms several previous empirical studies that suggest that entrepreneurship education improves entrepreneurial mindsets (Handayati et al., 2020; Mukhtar et al., 2021; Saptono et al., 2020; Solesvik et al., 2013; Wardana et al., 2020).

The results showed that the entrepreneurial mindset could increase the entrepreneurial readiness of Islamic higher education students. These results support previous empirical studies that suggest that an excellent entrepreneurial mindset positively affects entrepreneurial preparation (Saptono et al., 2020). In addition, entrepreneurial readiness depends on a person's mindset toward entrepreneurial activities (Carsrud & Brannvack, 2009). People who have a positive attitude toward entrepreneurial activities are more likely to become entrepreneurs. The entrepreneurial mindset is a unique way of thinking because it focuses more on recognizing opportunities and finding solutions to problems at hand (Walter & Block, 2016). The entrepreneurial mindset also offers potential insights into outcomes and situations to build entrepreneurial readiness (Haynie, Shepherd, Mosakowski & Early, 2010).

This study indicates that entrepreneurship education improves the entrepreneurship skills of Islamic higher education students. These results support previous empirical studies which state that entrepreneurship education in universities encourages the formation of entrepreneurship skills (Din et al., 2016; Fayolle, 2018) and improves technical skills and business management skills (Almahry, Sarea, Hamdan & Al Mubarak, 2019). The results propose that entrepreneurship skills improve Islamic higher education student entrepreneurship readiness. These results confirm Lazear's theory (Jack-of-All-Trade) of entrepreneurship skills. The finding is also in line with previous findings, stating that entrepreneurial skills can improve students' entrepreneurial practices (Ekpe et al., 2015).

Based on this study's findings, entrepreneurship education did not affect student entrepreneurship readiness. The relevant explanation for the results of this study is that entrepreneurship education might foster students' mindsets but does not directly increase students' entrepreneurial readiness. The study results do not support the previous studies, which stated that entrepreneurship education increases the entrepreneurial preparation of vocational students (Saptono et al., 2020) and students' startup businesses (Shirokova et al., 2016). However, this finding is in line with the prior research, which stated that entrepreneurship education is insufficient to create wealth from entrepreneurial activities in the future (Dutta, Li & Merenda, 2011).

Prior research has succeeded in providing an overview of the linkages between entrepreneurship education and the entrepreneurial mindset (Handayati et al., 2020; Mukhtar et al., 2021; Saptono et al., 2020; Solesvik et al., 2013; Wardana et al., 2020), entrepreneurship education and entrepreneurship readiness (Karyaningsih, Wibowo, Saptono & Narmaditya, 2020; Shirokova et al., 2016), as well as an entrepreneurial mindset and entrepreneurial readiness (Carsrud & Brannvack, 2009; Saptono et al., 2020). This study bridges the gap of previous research by providing the role of the entrepreneurial mindset as a mediator variable in the linkages between entrepreneurship education and entrepreneurial readiness.

This study explains the indirect relationship between entrepreneurship education and entrepreneurial readiness of Islamic higher education students, which is intervened by an entrepreneurial mindset. This follows the triadic reciprocality model, which explains the indirect relationship between environmental and behavioral variables mediated by cognitive variables. The indirect relationship in this study is in line with research that states the entrepreneurial mindset mediates the relationship between entrepreneurship education and entrepreneurial intentions where the intention in the study describes entrepreneurial behavior (Handayati et al., 2020; Karyaningsih et al., 2020).

Prior studies have succeeded in providing an overview of the relationship between entrepreneurship education and the entrepreneurial skills (Dzisi et al., 2018; Johannisson, 2016; Orazem, Jolly & Yu, 2015), entrepreneurship education, and entrepreneurial readiness (Saptono et al., 2020; Shirokova et al., 2016), as well as entrepreneurship skills and entrepreneurial readiness (Lechmann & Schnabel, 2014). This study bridges the gap of previous research by providing the role of entrepreneurship skills as an intervening variable in the relationship between entrepreneurship education and entrepreneurial readiness.

This finding explains the indirect relationship between entrepreneurship education and entrepreneurial readiness of Islamic higher education students, which is mediated by entrepreneurial skills. This finding strengthens Lazear's theory of entrepreneurship by finding empirical evidence that higher education needs to provide entrepreneurship education oriented towards entrepreneurial skills to increase entrepreneurial readiness. These findings are in line with prior research, which explains that the extent to which teaching can improve entrepreneurial skills affects the tendency to start a business and the opportunity for business survival (Mackiewicz & Kurczewska, 2020).

5. CONCLUSIONS

This article confirms four direct hypotheses and two indirect hypotheses and does not confirm one straightforward hypothesis. Entrepreneurship education improves the entrepreneurial mindset and entrepreneurial skills but does not directly affect entrepreneurial readiness. This finding also states that when the entrepreneurial mindset and entrepreneurship skills increased, it would increase the entrepreneurial readiness of students. In addition, this study also proves that entrepreneurial mindset and entrepreneurship skills intervene in the relationship between entrepreneurship education and entrepreneurial readiness.

These findings suggest that Islamic universities should still carry out entrepreneurial education oriented towards developing an entrepreneurial mindset and improving entrepreneurship skills. Students also need to build an entrepreneurial mindset and enhance their entrepreneurship skills to prepare for entrepreneurship. This can be done by participating in entrepreneurship education in universities and other entrepreneurial activities inside and outside universities.

The weakness of this study is that the data used are only a few universities representing the islands of Sumatra, Java, Kalimantan, Sulawesi, and Ambon, where not all private Islamic universities are described in this study. Further research should distinguish between public and private Islamic universities and Islamic universities in provincial capitals and other regions. This research shows that entrepreneurship education has no direct effect on entrepreneurial readiness. Future research is expected to build clearer theoretical dynamics in order to find constructs that can describe student entrepreneurial behavior.

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