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Development of Entrepreneurship Curriculum in the Context of Increasing Entrepreneurial Attitudes of Junior High School Students

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ABSTRACT

This study aimed to look at the role of innovation capacity in mediating the link between the entrepreneurial and independent curriculums on entrepreneurial attitudes. In this study, this hypothesis was evaluated quantitatively. The respondents completed a questionnaire as the research instrument. Junior high school students from Serang City, Banten, Indonesia, participated in this study. 215 individuals were chosen for this study using purposive sampling, and data were analyzed using a structural equation model (SEM). Based on the path coefficient, there is a significant influence between entrepreneurship curriculum and innovation ability of 0.222 with a P-Value of 0.002 <0.05. There is a considerable influence between independent curriculum on innovation ability is 0.341 with a P-Value of 0.000 > 0.05. A considerable influence between entrepreneurship curriculum and entrepreneurial attitude is 0.700 with a P-Value of 0.000 <0.05. Independent curriculum has a significant influence on the entrepreneurial attitude of 0.128 and P-Value of 0.021 <0.05. There is a considerable influence of innovation ability on the entrepreneurial attitude of 0.169 and P-Value of 0.000 <0.05. The mediation test indicates that innovation capacity positively influences entrepreneurship curriculum and entrepreneurial mindset at a significant level of 5%, with P values of 2.192, which is greater than 1.96. Moreover, the capacity for innovation can act as a mediator between an autonomous curriculum and an entrepreneurial mindset, as indicated by P Values > 1.96.

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1. INTRODUCTION

Education is an important concern in the pace of national growth (Penprase, 2018). Education of high quality must be accomplished (Gamage et al., 2020; Kelley & Knowles, 2016). Schools can plan their initiatives to enhance overall quality (Arribas Díaz & Martínez-Mediano, 2018; Ganimian &

Murnane, 2016). Entrepreneurship is very important for junior high school students because it has a positive impact that can be given by learning entrepreneurship, such as increasing creativity, independence, problem-solving, and business knowledge for students. (Hariri, 2021; Kalloo et al., 2020) (Agus et al., 2020; Ismail et al., 2021; Widodo, 2018) (Mahoney et al., 2021; Portera, 2020). Each educational unit must be arranged methodically to develop an entrepreneurship curriculum for junior high school students (Mukhamedov et al., 2020) (Nugroho et al., 2019; Rusilowati & Wahyudi, 2020; Triyono & Mateeke Moses, 2019).

One of the issues with education in Indonesia is that the quality of graduates is not entrepreneurial (Amalia & von Korflesch, 2021; Anggadwita et al., 2021; Saptono et al., 2020) (Dewi, 2022; Setiawan et al., 2019). It is caused by the application of an entrepreneurial-oriented curriculum that has not been implemented optimally (Bevan, 2017; Sansone et al., 2021) (Margot & Kettler, 2019) (Bodrova & Leong, 2018). Educational institutions must be managed, organized, and regulated optimally in the curriculum (Riinawati, 2021) (Machado, 2018).

In developing students' self-potential, education, particularly the curriculum, must be created in line with scientific advancements so that self-potential will organically innovate in an atmosphere of freedom, togetherness, and accountability (Fazey et al., 2020; Sibanda & Marongwe, 2022) (Sparrow et al., 2020). It is desired that students understand the importance of education in developing outstanding (Razzouk & Shute, 2012) (Johnson et al., 2013). As a result, abilities, soft skills, and physical skills are required to generate superior products (Jeganathan et al., 2018) (Santoso et al., 2021; Zighan & EL-Qasem, 2021) (Bastas & Altinay, 2019). Furthermore, an entrepreneurship-based curriculum is intended to be a standard for school success in generating highly competitive students (Awaysheh & Bonfiglio, 2017; Othman & Nasrudin, 2016; Vodă & Florea, 2019).

This study looks at the variables that affect entrepreneurial attitude, specifically entrepreneurship curriculum and independent curriculum, in order to investigate the role of innovation capacity as a mediator in fostering an entrepreneurial attitude. In order for the direct and indirect relationships between the factors under study to contribute to academic research as new literature in the field of education development.

The curriculum and silabus, as well as the educational facilities and infrastructure that support the implementation of entrepreneurship education, are intended to increase mental ability, aptitude, and attitude, which are expected to increase graduates who can become entrepreneurs, even if they start small, and grow into well-established entrepreneurs (Arranz et al., 2017; Qiu et al., 2023). The teachers will follow students throughout the entrepreneurship curriculum, from creating a business to establishing, building, and sustaining a firm until their business can function independently (Piperopoulos & Dimov, 2015). Several findings have been clarified by researchers that the entrepreneurial curriculum will increase students' innovation abilities (Hu et al., 2021; Wei et al., 2019; Zhao et al., 2022). According to Paek & Lee (2018) entrepreneurial competence is vital in creating imaginative and innovative possibilities and the capacity to gather resources and transform opportunities into profits amid risk and uncertainty.

Cahyono (2022) explain that the Independent Curriculum is a curriculum that includes a variety of intracurricular learning opportunities. Learning will be optimized so students have adequate time to investigate topics and improve their skills (Rakhmawati et al., 2022). Implementing an autonomous curriculum will make it more relevant and participatory, and project-based learning will give students numerous opportunities to investigate factual topics actively (Hawari & Noor, 2020). Teachers must be able to become tutors, facilitators, and inspirers for their students to urge them to become active, creative, and inventive students, which is one of the most significant components in the effective implementation of the independent curriculum (Arviansyah & Shagena, 2022; Jannati et al., 2023). Students at independent learning are free to learn in the way that best suits their needs and interests (Chik & Ho, 2017). It increases their participation and independence in the learning process (Gea et al., 2023). The emphasis is on developing workplace-relevant skills and knowledge to prepare students for the challenges better (Rush Hovde & Renguette, 2017).

Entrepreneurship is the manifestation of an individual's creative and innovative mindset and actions when engaging in an endeavour (Ozaralli & Rivenburgh, 2016). Entrepreneurship education seeks to develop individuals with an entrepreneurial attitude across several professions, not limited to business owners (Wardana et al., 2020). The entrepreneurship programme should promote entrepreneurial characteristics such as creativity, decision-making, leadership, social networking, time management, and teamwork (Franco & DeLuca, 2019; Sousa & Rocha, 2017). The entrepreneurship education system is undergoing modifications to foster an entrepreneurial mindset in students, moving away from the conventional focus on operational control areas like finance, marketing, human resources, and operations (Johannisson, 2018). The challenge lies in how the educational system can improve the skills, traits, and behavioural attributes of an entrepreneur in their students (Vodă & Florea, 2019). Liu et al. (2019) and Kusumojanto et al. (2021) discovered that studying about entrepreneurship can enhance students' attitudes towards entrepreneurship. Entrepreneurship education should offer students the chance to directly experience the challenges of starting and managing a business. Additionally, students should have the opportunity to learn from successful entrepreneurs through apprenticeships to cultivate entrepreneurial attitudes (Yan et al., 2023).

Milda et al. (2023) explain that the independent curriculum imparts entrepreneurial information to students and instills self-confidence and a forward-thinking mindset, allowing students' creativity to emerge to capitalize on the myriad business possibilities around them. Different entrepreneurial mindsets are established due to the stimulation of entrepreneurial ideas. Including MSME partnership onboarding activities is part of the endeavor to inspire participants with business ideas. Partner entrepreneurs may motivate students to be more confident, innovative, and creative in taking advantage of business possibilities around them (Gundry et al., 2014).

The capacity to develop something new that is extremely important and beneficial to oneself and others is referred to as an entrepreneurial attitude (Liñán et al., 2011). According to Nikitina et al. (2022), it is a value or spirit that fosters creativity and invention in problem-solving and identifying chances to better economic life. So, an entrepreneurial mindset is the ideal character of an entrepreneur, manifested in the beginning, implementation, and development of a business (Mauer et al., 2017). Battisti et al. (2022) revealed that increasing entrepreneurial mindsets were motivated by innovative initiatives that people might carry out. Students who can innovate are likely to enhance their entrepreneurial mentality and assist the businesses they build to compete in an ever-changing industrial environment (Hsieh & Chou, 2018). Building an innovation capability is a difficult task that necessitates the rigorous development of qualities that a business does not currently have, namely being proactive, inventive, and risk-taking, all of which are markers of an entrepreneurial approach (Makhloufi et al., 2021).

Based on prior research and as an example for more study, we developed a research framework, which is depicted in Figure 1 below.

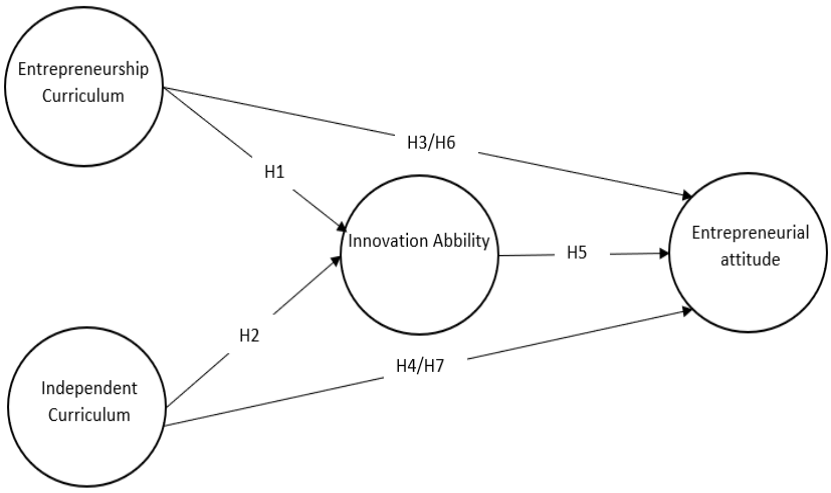

Figure 1. Conceptual research

2. METHODS

The study took place at a private vocational school in Serang City, Banten, Indonesia, with a population of 27 public junior high schools as identified by the Education and Culture Office of Serang City. This study employed purposive sampling to pick participants based on specific criteria set by the author. The sample included instructors and students, with ten representatives chosen from each school, resulting in a total sample size of 270 individuals. Therefore, the total number of selected individuals is 270. Researchers handed out 300 questionnaires in person and via Google form. Of these, 253 were returned, and 215 had usable data for analysis. The hypothesis of the study framework was tested using a structural equation model (SEM) with SmartPLS for data analysis and SPSS for testing assumptions. The author tests whether the SEM test passes the assumption test, but SEM using SmartPLS can be analysed without undergoing the assumption test first (Ghozali, 2015).

The survey instrument uses closed-ended questions to assess respondents' views on the competitive advantage of vocational graduates as the dependent variable, with servant, participative, and democratic leadership as independent factors, and graduate competency as the moderator variable. The study incorporates three entrepreneurial curriculum components from Wardana et al.'s research conducted in 2020. Three curriculum subjects for self-directed study were selected from (Kurniati et al., 2022). Eight innovation capacity indicators extracted from Gundry et al. (2014).

3. FINDINGS AND DISCUSSION

3.1 Outer Model Analysis

Researchers can evaluate the indicator's validity using the convergent technique, where the value of the external loading factor serves as the ultimate reference point. Loading factor values ranging from 0.50 to 0.70 are suitable for initial exploratory study in the development of a measurement scale. Conducting a preliminary investigation is crucial for developing a measuring scale. All indicators in this study exhibited an outer loading value more than 0.70, meeting the convergent validity criterion outlined in Table 1.

During the second stage, the square root coefficient of variance (AVE) from each latent factor was compared to the correlation coefficient between the other factors in the model to evaluate the discriminant validity of a variable. The experiment attempted to determine if the variable could differentiate among the several groups. The AVE's value is significantly higher than 0.5. All constructs tested in this study had discriminant validity values exceeding 0.50, as shown in Table 3 (Fornell & Larcker, 1981). Composite reliability is used to assess the reliability of the variable indicators at the end of the procedure. For results to be deemed reliable, both Cronbach's alpha and composite reliability ratings must exceed 0.70 (Chin, 2010).

Table 1. Explanatory Data Result.

Construct	Items	Outer Loading	Cronbach's Alpha	rho_A	CR	AVE
Entrepreneurship Curriculum	EC1	0.901	0.889	0.889	0.931	0.819
	EC2	0.912				
	EC3	0.902				
Independent Curriculum	IC1	0.923	0.936	0.938	0.959	0.887
	IC2	0.954				
	IC3	0.948				
Innovation Ability	IA1	0.826	0.949	0.954	0.957	0.737
	IA2	0.899				
	IA3	0.863				

Construct	Items	Outer Loading	Cronbach's Alpha	rho_A	CR	AVE
Entrepreneurial Attitude	IA4	0.806	0.899	0.899	0.937	0.832
	IA5	0.898				
	IA6	0.824				
	IA7	0.888				
	IA8	0.861				
	EA1	0.908				
	EA2	0.920				
	EA3	0.908				

The results of computing the composite dependability showed a range that was greater than 0.70, ranging from 0.806 to 0.954. Stated otherwise, the range exceeded 0.70. It was clear that the variable's indications were reliable. Since every Cronbach's alpha value was more than 0.70, it could be concluded that the indications were accurate and could not be regarded as faulty. The scores ranged from 0.889 to 0.949 (Chin, 2010).

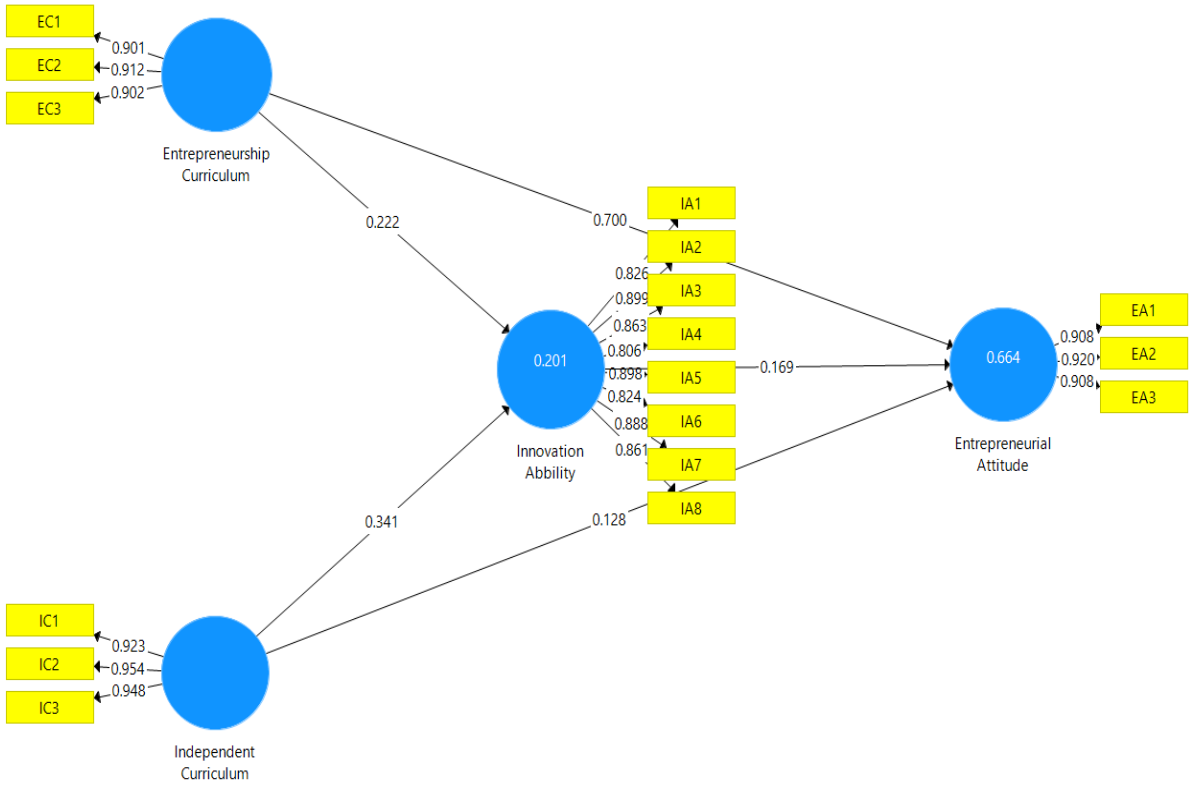

Figure 2. Path Analysis Result.

Figure 2 illustrates the outcomes of using SmartPLS to process the data. It is clear from this that loading values more than 0.70 are present in all construct manifestations that were investigated in this investigation. It demonstrates how the manifest variable's high degree of validity, with a loading value of greater than 0.70, fulfills convergent validity.

3.2 Structural equation model suitability index

When utilizing Smart PLS software to calculate the structural equation model appropriateness index in SEM analysis, the following three parameters are taken into account. First, the degree to which

exogenous variables impact endogenous ones is determined using the coefficient R2. A model is considered moderate when its R2 value is between 0.5-0.75, and weak when it is less than 0.25 (Ghazali & Latan, 2014). The higher the R2 coefficient, the better. R2 and R2 for innovative ability are 0.279 (poor); R2 and R2 for entrepreneurial mentality are 0.692 (moderate).

3.3 Inner Model Analysis

A bootstrap-based simulation is used to analyze each relationship on the sample. The goal of this exam is to lower the frequency of abnormal research data. Test results obtained using the bootstrap technique (refer to Figure 3).

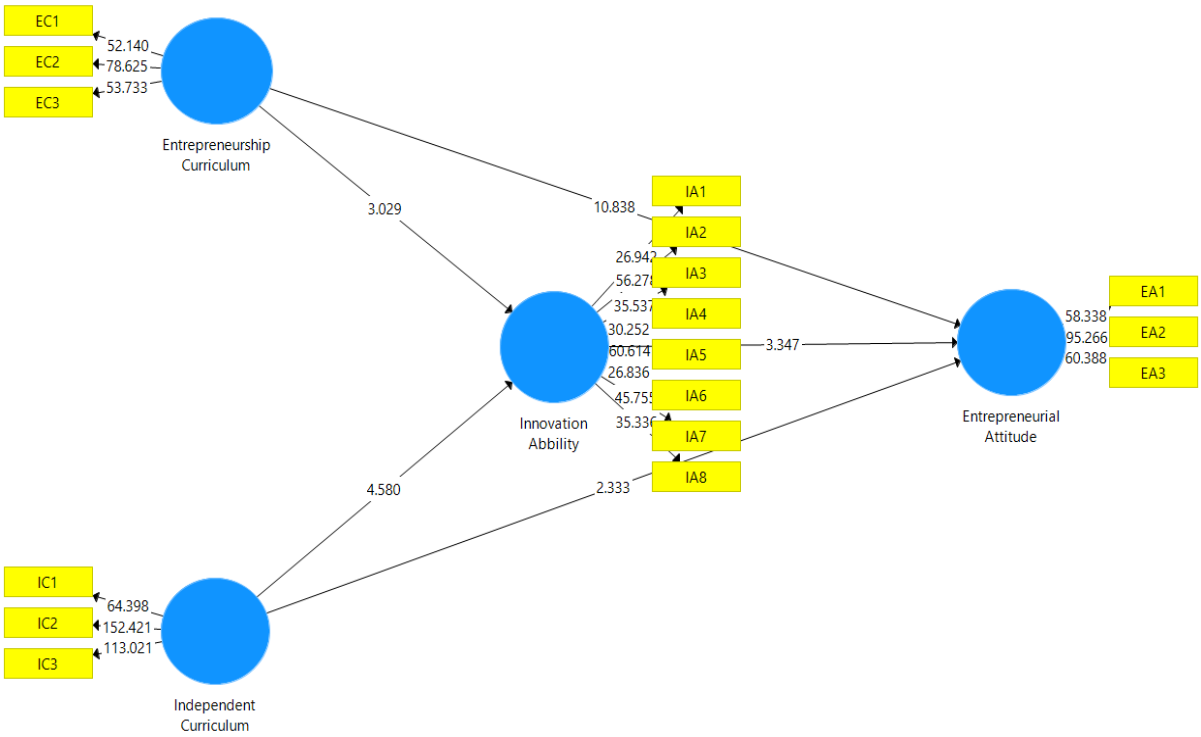

Figure 3. Bootstrapping Inner Model.

Calculating the path coefficient allows one to determine the extent to which an independent variable has an effect on a dependent variable. The influence of the entrepreneurial attitude on the entrepreneurial attitude has the largest path coefficient value of 10.838, as shown in Figure 3. The effect of the independent curriculum on innovation capacity comes in second with 4.580. The impact of an entrepreneurship curriculum on innovation ability was 3.029, whereas the impact of innovation ability on entrepreneurial mindset was 3.347. Lastly, the influence of a self-directed course of study on an entrepreneurial mindset is 2.333.

The significance level associated with accepting a hypothesis can be ascertained by looking at the P-Values. In the event that the P-Values are less than 0.05, the study hypothesis might be accepted. To determine the P-value of a model in SmartPLS, a bootstrapping operation is carried out on a valid and reliable model that meets the feasibility conditions. It can observe that the following table (Table 2) shows the bootstrapping outcomes.

Table 2. Path Coefficient Result.

Hypothesis	Construct *)	Original Sample	Standard Deviation	T Statistics	P Values	Remark
H1	EC -> IA	0.222	0.071	3.125	0.002	Accepted
H2	IC-> IA	0.341	0.072	4.743	0.000	Accepted
H3	EC -> EA	0.700	0.061	11.418	0.000	Accepted
H4	IC -> EA	0.128	0.055	2.313	0.021	Accepted
H5	IA -> EA	0.169	0.047	3.569	0.000	Accepted

*): EC=Entrepreneurship Curriculum; IC= Independent Curriculum; IA=Innovation Ability; EA=Entrepreneurial Attitude

The route coefficient between entrepreneurship curriculum and innovation ability was found to be 0.222 with a P-Value of 0.002, indicating a strong influence of entrepreneurship education on innovation ability. H1 is approved because a positive parameter coefficient suggests that the entrepreneurial programme enhances the capacity for fraudulent creation. A P-Value of 0.000 > 0.05 and a correlation of 0.341 between independent curriculum and creativity capacity indicate a significant link between the two. Positive parameter coefficients suggest that as the independent curriculum increases, so does innovation capacity, supporting H2. There is a substantial association between entrepreneurship curriculum and entrepreneurial mentality, as indicated by a correlation coefficient of 0.700 and a P-Value of 0.000 < 0.05. If the coefficient of the parameter is positive, hypothesis H3, stating that entrepreneurship curriculum enhances entrepreneurial mentality, is supported. Conclusively, with an entrepreneurial attitude of 0.128 and a P-Value of 0.021 < 0.05, it was found that there is a substantial correlation between independent curriculum and entrepreneurial attitude. If the coefficient of the parameter is positive, it means that as the independent curriculum increases, so does the entrepreneurial mentality, therefore supporting hypothesis H4. A significant link was found between innovation capacity and entrepreneurial mindset, with an effect size of 0.169 and a P-Value of 0.000, which is less than 0.05. If the coefficient of the parameter is positive, it suggests that there is a direct relationship between innovation ability and entrepreneurial mentality, therefore supporting hypothesis H5.

In addition, to determine if the innovation ability can mediate the link between entrepreneurship curriculum and independent curriculum on entrepreneurial attitude, the following route coefficients are examined (Table 3).

Table 3. Mediation test

Hypothesis	Construct *)	Original Sample	Standard Deviation	T Statistics	P Values	Remark
H6	EC -> IA -> EA	0.038	0.017	2.192	0.029	Accepted
H7	IC -> IA -> EA	0.058	0.023	2.509	0.012	Accepted

*): EC=Entrepreneurship Curriculum; IC= Independent Curriculum; IA=Innovation Ability; EA=Entrepreneurial Attitude

The mediation test shows that, at a significance level of 5% and P values 2.192 >1.96, innovation ability has a positive impact on entrepreneurial curriculum and entrepreneurial attitude. Thus, it is plausible to contend that the relationship between an entrepreneurial mindset and curriculum can be mediated by innovation capacity; for this reason, Hypothesis H6 is approved. Additionally, P Values > 1.96 demonstrate that innovation capacity can moderate the association between independent curriculum and entrepreneurial mindset, indicating that H7 is accepted.

Discussion

Evaluating the initial hypothesis (H1) involves determining if the entrepreneurship curriculum has a favourable impact on innovation abilities. This study's findings demonstrate that the Entrepreneurship programme positively impacts Innovation ability. The Entrepreneurship curriculum's level in an organisation directly correlates with its Innovation capabilities. Testing hypothesis H2 involves determining if the independent curriculum has a favourable impact on innovation ability. This study's findings demonstrate that the Independent Curriculum positively impacts Innovation Capability. A higher level of independent curricula correlates with a higher level of innovation ability. This study's results align with other studies indicating that Entrepreneurship curriculum positively and significantly impacts Innovation capacity. The quality of basic education is crucial in the education system as it serves as the cornerstone for higher levels of education and success in society. It would be beneficial to instill entrepreneurial values in individuals at a young age and customise them based on their level of maturity. Integrating a variety of activities into school lessons will help students gain experience in understanding and applying entrepreneurial concepts across different subjects.

This project requires students to think imaginatively and innovatively, which is one of the traits of entrepreneurship. This entrepreneurship curriculum will establish an entrepreneurial curriculum design that is essentially a social reconstruction curriculum. It is consistent with the notion that the necessity of building an entrepreneurship curriculum in schools is tied to the problem of graduates of educational institutions needing a better entrepreneurial spirit, which leads to high unemployment rates in Indonesia. The entrepreneurial curriculum designed in this junior high school aims to alleviate the problem of unemployment in society by giving kids experience in solving difficulties from an early age. If students are used to dealing with difficulties and are educated to solve them in school, they can solve the challenges they confront in society.

However, implementing the entrepreneurship curriculum in junior high schools will only partially implement the three assumptions of the social reconstruction curriculum because the emphasis is not limited to topics but also school-based activities that foster an entrepreneurial spirit. The word "challenge" will describe entrepreneurial curricular activities that need quick issue resolution to encourage students to take calculated risks. The core of an academic topic curriculum paired with technical education may be utilized to develop entrepreneurial ideals that shape entrepreneurial competence. Establishing an entrepreneurial curriculum at the junior high school level will provide students with the skills to live freely in society, allowing them to contribute to the nation's advancement. The materials designed for the entrepreneurship curriculum are based on entrepreneurial traits such as self-confidence, creativity, foresight, results-oriented, hard work, responsibility, invention, and honesty (originality). Some of the aforementioned entrepreneurial qualities are already present in themes such as religion and citizenship, allowing them to support one another.

Hypothesis 3 (H3) investigates if the entrepreneurship programme positively influences the entrepreneurial mindset. This study's findings demonstrate that the entrepreneurship programme positively impacts the entrepreneurial attitude. A correlation exists between the level of entrepreneurship curriculum and the level of entrepreneurial attitude. Examining hypothesis H4 involves determining if the independent curriculum has a favourable impact on entrepreneurial mentality. This study's findings demonstrate that the autonomous curriculum positively influences entrepreneurial mentality. The correlation indicates that a more advanced autonomous curriculum is associated with a stronger entrepreneurial mindset.

With suitable learning activity programs that foster creativity and entrepreneurial interest, the independent curriculum policy encourages the development of student entrepreneurial interest. Including Business Internships in the independent curriculum is an effort to raise the quality of graduates prepared to compete and open up new business prospects in the digital economy. The goals of the entrepreneurial activity program are to (1) increase student interest in entrepreneurship; (2) provide opportunities for students to produce creative and innovative work as a provision for

entrepreneurship before or after becoming alums; (3) reduce intellectual unemployment among undergraduates; and (4) improve graduate quality through mastery of academic knowledge, thinking skills, management skills, and communication skills.

Through a variety of learning activities like student exchanges, internships and work practices, research, independent projects, entrepreneurial endeavors, and humanitarian projects, as well as free choice in learning activities, an independent curriculum enables students to acquire new competencies and a broader learning experience. I'm out of school. It is intended that future students will be able to innovate and be interested in entrepreneurship. The learning process with the notion of "Freedom to Learn" is observed in the classroom and outside of it. A communal setting with business potential may be used as a learning environment. The learning technique of just using textbooks is inappropriate for carrying out a series of competence tests that can meet the assessment goals of this program. As a direct implementation technique, textbook media can be integrated with the learning-by-doing method. The learning-by-doing approach, also known as learning while doing in Indonesian, is one of the strategies with the best learning outcomes. Implementing an independent curriculum in a junior high school setting must provide value to teachers, students, and education personnel involved in its implementation.

Testing the fifth hypothesis (H5) is whether the innovation ability positively affect the entrepreneurial attitude. The study's findings demonstrate that the SDGs have a favorable impact on an entrepreneurial mindset. It proves that the higher the innovation ability, the higher of the entrepreneurial attitude. Applying the idea of entrepreneurship itself to business organizations has implications that suggest students need to have an imaginative and creative entrepreneurial spirit, especially in light of the current state of affairs, if they hope to succeed in the face of open competition in the global economy. Of course, we need modern entrepreneurs who are more perceptive, visionary, stay up to date on the latest advancements, and are receptive to novel concepts and ideas. With foresight, always working and having initiative, developing something new, being open to new experiences, and even being unsatisfied with what is being done, success in carrying out these commercial tasks connected to competence is a side of success. Entrepreneurial skill, in this case, creativity and invention as determinants, are entrepreneurial attributes inferred by the entrepreneurial knowledge received.

Testing hypothesis H6 involves examining whether entrepreneurship curriculum impacts entrepreneurial mindset by way of innovation capacity mediation. This study shows that innovation capacity acts as a mediator between Entrepreneurship curriculum and entrepreneurial attitude. Entrepreneurship education can influence entrepreneurial attitude either directly or indirectly by affecting Innovation capacity. Testing hypothesis H7 involves examining if the independent curriculum influences entrepreneurial mindset by way of Innovation ability mediation. This study's findings suggest that Innovation ability acts as a mediator between the independent curriculum and entrepreneurial attitude. Independent curriculum can impact entrepreneurial attitude either directly or indirectly by influencing innovative ability.

4. CONCLUSION

The path coefficient indicates a significant relationship between the entrepreneurship curriculum and innovation capacity, with a coefficient of 0.222 and a P-Value of 0.002, which is less than the significance level of 0.05. The correlation between an independent curriculum and creativity ability is significant at 0.341 with a P-Value of 0.000, which is less than 0.05. There is a significant correlation of 0.700 between entrepreneurship curriculum and entrepreneurial mentality, with a P-Value of 0.000 which is less than 0.05. An independent curriculum has a statistically significant impact on the entrepreneurial attitude with a coefficient of 0.128 and a P-Value of 0.021, which is less than 0.05. The innovation ability has a significant impact on the entrepreneurial attitude with a coefficient of 0.169 and a P-Value of 0.000, which is less than 0.05. The mediation test indicates that innovation capacity positively influences both entrepreneurship curriculum and entrepreneurial mentality, with a significance level of 5% and P values of 2.192, which is greater than 1.96. Moreover, the capacity for

innovation can act as a mediator between an autonomous curriculum and an entrepreneurial mindset, as indicated by P Values > 1.96. Future research can further investigate the mechanism of creative ability.

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