Correlation of Self Efficacy with Entrepreneurial Attitudes of Science Teacher Candidates

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Abstract

This study aims to determine the correlation of self-efficacy with student attitudes in the field of entrepreneurship. This study is a descriptive exploratory study with 35 biology education students as subjects. The research instrument used was a closed questionnaire with degraded answers according to a Likert scale that had been validated by experts and declared valid. Analysis of the research data used is descriptive statistics and inferential statistics with a product moment (rxy) correlation test at a significance level of 5%. The study results show that (1) students' perceptions about self-efficacy has an average score of 3.12 in the Good category and an entrepreneurial attitude of 3.06 in the Good category; (2) there is a significant relationship between self-efficacy and student attitudes in the field of entrepreneurship with a significance value of 0.00 which is smaller than the alpha testing value of 0.05 (<0.05); (3) the value of the correlation coefficient is 0.803, which means that the relationship is very strong between self-efficacy and student attitudes in the field of entrepreneurship.

Keywords: self-efficacy, entrepreneurial attitude, students


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INTRODUCTION

The current era of globalization presents increasingly tough competition and challenges, especially in the economic field, which occur from the local, regional and national to the global level between countries (Muliadi et al., 2021). This global competition requires everyone to be more independent, competitive, have skills, and able to create jobs (Muliadi, Asri & Lestariini, 2020; Normawati & Margono, 2016). Thus, students are expected to have 21st century skills, namely Critical Thinking, Creativity, Collaboration, and Communication (Afwan, Suryani & Ardiano, 2020; Maulidah, 2019). This can be realized through life skills-oriented educational policies (Wahyuni & Hidayati (2017). It is important to develop student life skills in a structured and systematic manner (Sudarsana, 2017), in order to provide “provisions” for students after graduation (Noor, 2015). The development of entrepreneurship education in tertiary institutions is one of the structured and systematic efforts to develop life skills for students (Muliadi, Sarjan & Rohmat, 2022). This policy is essential as an effort to solve the problem of high workforce and disruption that unfinished (Muliadi & Mirawati, 2020). The Central Bureau of Statistics in February 2022 noted that the open unemployment rate was 5.83% of the total working age population in Indonesia and 14% of them were university graduates.

This unemployment rate confirms that there are university graduates who do not yet have sufficient competence to be able to compete in the world of work (Muliadi & Mirawati, 2020). According to Indriyatni, Wahyuningsih & Purwanto (2014), college graduates who contribute
Entrepreneurial skills are important for college graduates to have (Subagio, Muliadi & Sutarto, 2021), in order to reduce unemployment problems and job availability (Munawar & Supriatna, 2018; Muliadi, Mirawati & Prayogi, 2021). Entrepreneurs can help create jobs through the development of companies, industries and businesses (Munawar & Supriatna, 2018). Dewi (2016) emphasized that developing entrepreneurship and creating businesses is a concrete solution to solving the problem of poverty and unemployment. Thus, the development of entrepreneurship learning for students in tertiary institutions has a very strategic role in developing entrepreneurial knowledge and skills in a structured and systematic way (Muliadi & Mirawati, 2020; Wardhani, Riani & Susilaningsih, 2018; Paramita, 2017). Entrepreneurial competence can build student independence in building careers and have a positive impact on the nation's economy (Listyawati, 2017; Mirawati, Wardana, & Sukaatmadja, 2016). This is confirmed by the opinion of Afwan, Vahlia & Sholila (2022) that economic growth can be increased by efforts to produce entrepreneurs who are able to innovate and have global competitiveness. The growth of new businesses in various fields in the long term can stabilize the economy (Slamet, Tunjungsari & Le, 2014). According to Listyawati (2017) entrepreneurs have a significant contribution to the economic progress of a nation, where developed countries require a minimum of 2% of the population to become entrepreneurs (Muliadi, 2020; Mirawati, Wardana, & Sukaatmadja, 2016).

Government has launched the national entrepreneurship movement since February 2011 to encourage people, especially the younger generation, to be active in entrepreneurship (Setyawan, 2016; Mirawati, Wardana & Sukaatmadja, 2016). One form of implementation of this national movement is the existence of a policy requiring tertiary institutions to organize entrepreneurship education courses (Muliadi, Asri & Lestarini, 2020), as an effort to produce creative, innovative, and entrepreneurial graduates (Primandaru, 2017; Darmawan & Warnika, 2016; Fatimah, 2013). Entrepreneurship education becomes the eye compulsory lecture in the curriculum of the Biology Education Study Program at the Mandalika University of Education, to facilitate students in developing entrepreneurial knowledge and skills through the learning process. According to Wardhani, Riani & Susilaningsih (2018), entrepreneurship learning is effective for facilitating the development of students' knowledge, skills, beliefs, and attitudes as entrepreneurs.

Student self-efficacy and attitudes in the field of entrepreneurship can be developed through entrepreneurship education (Subagio, Muliadi & Sutarto, 2021; Muliadi, 2020; Supeni & Efendi, 2017; Setyawan, 2016). This is in accordance with the opinion of Suryana (2011) that entrepreneurship is not only an innate talent or a matter of mere field experience, but can also be learned and taught. Entrepreneurial education is one of the important factors that influence success in fostering a student's entrepreneurial spirit (Dewi, 2016). Entrepreneurial knowledge and skills obtained in entrepreneurship education can strengthen self-efficacy students to pursue entrepreneurship (Muliadi, Mirawati & Prayogi, 2021; Hattab, 2014). This was confirmed by Indrawati, Herkulana & Syharud (2017) that Student self-efficacy in
entrepreneurship is influenced by knowledge and attitudes as a form of positive or negative belief in entrepreneurial behavior. Self-efficacy and the attitude of students in the field of entrepreneurship can be grown and developed from an early age through the learning process on campus, family, and the surrounding environment (Srigustini, 2014; Muliadi & Mirawati, 2020).

Santi, Hamzah & Rahmawati (2017) explained that in Theory of Planned Behavior (TPB) it is emphasized that there is a variable Perceived Behavior Control or operationally it is called self-efficacy, which is a form of a person's self-efficacy for entrepreneurship from the internal side. Thus, students' self-efficacy to pursue the field of entrepreneurship is a deliberate decision and can be planned, one of which is through entrepreneurship education (Wilson, 2007). This was explained by Santi, Hamzah & Rahmawati (2017) that entrepreneurship education can influence student self-efficacy and attitudes towards entrepreneurship (Santi, Hamzah & Rahmawati, 2017; Subagio, Muliadi & Sutarto, 2021). Thus, an exploratory study is needed to determine the correlation self-efficacy and attitudes of students in the field of entrepreneurship.

**METHOD**

This research is an ex post facto research with a correlative descriptive approach (Subagio, Muliadi & Sutarto, 2021; Muliadi, 2020b). Ex post facto research is to examine causal relationships that are not manipulated or treated by researchers, but researchers only record data from activities that have already occurred (Muliadi, 2020a; Arikunto, 2016; Singarimbun & Sofyan, 2009). Correlative descriptive study was used to determine the relationship between self-efficacy and student attitudes in the field of entrepreneurship. Respondents to this study were 35 students of biology education at Mandalika University of Education who were determined by the convenience sampling technique with the reason of considering the time of research and the level of the accessibility of respondents in filling out online questionnaires (Fink, 2011).

The research instrument used was a closed questionnaire with degraded answers according to the Likert scale (Muliadi, 2020c), by utilizing the media google form (Adha, et al., 2020). The instrument was compiled referring to indicators of entrepreneurial attitudes and student entrepreneurial interest that had been developed by Perwitasari (2017). The questionnaire was compiled based on perceived indicators of student self-efficacy and attitudes in the field of entrepreneurship developed by Muliadi, Mirawati & Prayogi (2021). The questionnaire consists of 14 statements has been validated by an expert and declared valid.

Analysis of the research data used is descriptive quantitative statistics and inferential statistics. Quantitative descriptive statistics are used to describe student perceptions of self-efficacy and student attitudes in the field of entrepreneurship. The average student perception data will be converted into categories as presented in the following table.

<table>
<thead>
<tr>
<th>Average score ((\bar{p}))</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.51 – 4.00</td>
<td>Very good</td>
</tr>
<tr>
<td>2.51 – 3.50</td>
<td>Good</td>
</tr>
<tr>
<td>1.51 – 2.50</td>
<td>Pretty good</td>
</tr>
<tr>
<td>1.00 – 1.50</td>
<td>Not good</td>
</tr>
</tbody>
</table>

Statistical analysis used to determine the relationship between self-efficacy and student attitudes in the field of entrepreneurship, namely the product moment (rxy) correlation test at a significance level of 5%. The formulation of the statistical hypothesis is: \(H_0 : \mu_1 = \mu_2\) (no significant relationship between self-efficacy and student attitudes in the entrepreneurial field) and \(H_1 : \mu_1 \neq \mu_2\) (there is a significant relationship between self-efficacy and student attitudes in the entrepreneurial field). If the results of the analysis are significant or the p-value of the correlation test is less than 0.05, then \(H_0\) is rejected and \(H_1\) is accepted or vice versa. To
interpret the value of the correlation index between attitudes and entrepreneurial interests of converted students, refer to the following guidelines.

**Table 2. Interpretation of the correlation coefficient**

<table>
<thead>
<tr>
<th>Correlation coefficient (r)</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.00 – 0.199</td>
<td>Correlation is very weak or very low</td>
</tr>
<tr>
<td>0.20 – 0.399</td>
<td>Correlation is weak or low</td>
</tr>
<tr>
<td>0.40 – 0.599</td>
<td>Correlation is moderate</td>
</tr>
<tr>
<td>0.60 – 0.799</td>
<td>Correlation is strong or high</td>
</tr>
<tr>
<td>0.80 – 1.00</td>
<td>Correlation is very strong or very high</td>
</tr>
</tbody>
</table>

**RESULTS AND DISCUSSION**

Description of student perception data about self-efficacy and student attitudes in the field of entrepreneurship are presented in Table 2 below.

**Table 2. Student perception data**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Σ Score</th>
<th>p̅</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy</td>
<td>35</td>
<td>109.42</td>
<td>3.12</td>
<td>Good</td>
</tr>
<tr>
<td>Entrepreneurial Attitude</td>
<td>35</td>
<td>107.14</td>
<td>3.06</td>
<td>Good</td>
</tr>
</tbody>
</table>

Based on Table 2, it is known that the average score of student perceptions about self-efficacy is 3.12 in the Good category and 3.06 for entrepreneurial attitude in the Good category. The description of the data is emphasized in the following Figure 2.

![Figure 1. Average perception of biology education students](image)

Inferential statistical analysis using a correlational test to determine the relationship between self-efficacy and student attitudes in the field of entrepreneurship, where the test is first carried out normality and homogeneity. The normality and homogeneity test results are presented in Table 3 below.

**Table 3. Homogeneity and normality test results**

<table>
<thead>
<tr>
<th>N</th>
<th>Homogeneity</th>
<th>Normality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Levenes Statistical test score</td>
<td>Sig.</td>
</tr>
<tr>
<td>49</td>
<td>0.904</td>
<td>0.546</td>
</tr>
</tbody>
</table>

Homogeneity test results (Levenes test) of 0.904 with a significance value of 0.546 greater than the alpha test (>0.05), which means that the variance of the data is homogeneous, while the results of the normality test (Kolmogorov-Smirnov's test) are 0.940 with a significance value of 0.340 greater than the alpha test (<0.05) which means that the data is normally distributed.
The results of the analysis of the product moment ($r_{xy}$) correlation test regarding the relationship between attitudes and student entrepreneurial interests is presented in Table 4 below.

**Table 4.** The results of the product moment ($r_{xy}$) correlation test

<table>
<thead>
<tr>
<th>Model</th>
<th>N</th>
<th>Pearson Correlation Test Score</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X – Y</td>
<td>35</td>
<td>0.803</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Correlation test results in Table 4, it is known that the significance value of 0.000 is smaller than the alpha test value of 0.05 (<0.05), so that $H_0$ is rejected and $H_1$ is accepted which means that there is a significant relationship between self-efficacy with the attitude of students in the field of entrepreneurship. The correlation coefficient value is 0.803 which means that the relationship is very strong or very high.

The results of the research show that (1) biology education students' perceptions of self-efficacy and entrepreneurial attitudes are in the Good category, (2) there is a significant relationship between self-efficacy and student attitudes in the field of entrepreneurship, where the correlation coefficient value is 0.803, which means that the relationship is very strong or very high. The findings in this study indicate that biology education students have fairly good entrepreneurial beliefs and attitudes, where students feel confident and capable of entrepreneurship. This confirms that the attitude of students to entrepreneurship is certainly preceded by the existence of student self-efficacy (belief) in the field of entrepreneurship. Student confidence is high enough to become an entrepreneur because students already have entrepreneurial knowledge and skills (Muliadi, Mirawati & Prayogi, 2021). Thus, knowledge of biology education students in the field of entrepreneurship provides reinforcement of self-efficacy students and then influence students' attitudes towards entrepreneurship. This is consistent with the results of Mirawati & Subagio research (2022) that entrepreneurship education with self-efficacy moderation influences student entrepreneurial attitudes. The results of Muliadi, Mirawati & Prayogi research (2021) also emphasize that students' self-efficacy in the entrepreneurial field is influenced by factors of entrepreneurship education and subjective norms.

The results of this study explain that entrepreneurship learning is an important factor for developing student knowledge in the field of entrepreneurship which in turn fosters self-efficacy (confidence) students to pursue entrepreneurship (Muliadi, Mirawati & Prayogi, 2021). This is in accordance with the results of research by Santi, Hamzah & Rahmawati (2017) that there is a positive effect of entrepreneurship education on entrepreneurial beliefs and intentions. Wilson (2007) confirmed that self-efficacy and entrepreneurial attitude is a planned decision, so that it can be developed through entrepreneurship education. The emergence of attitudes and interest in entrepreneurship begins with students' self-efficacy (confidence) in entrepreneurship, so that they can produce reliable entrepreneurs (Suryana, 2011). According to Fatimah (2013), entrepreneurial competence can be developed through entrepreneurship learning activities, so that students can become graduates who are competent in the field of business with indicators that are creative, innovative, confident, willing to take risks, spirited leaders, confident, not dependent, optimistic, diligent, and hard work (Muliadi & Mirawati 2020; Muliadi, 2020b). This is confirmed by the opinion of Dewi (2016) that entrepreneurial learning can move intrinsic factors in students to become entrepreneurs, so that entrepreneurial attitudes can be formed.

In this study, it can be emphasized that the administration of entrepreneurship education courses has a positive impact on self-efficacy students in entrepreneurship, where the entrepreneurial learning process is effective in facilitating the development of entrepreneurial knowledge and skills for biology education students (Muliadi, Mirawati & Prayogi, 2021). This is in accordance with the results of research by Santi, Hamzah & Rahmawati (2017) explaining that entrepreneurship education has a positive and significant influence on entrepreneurial
beliefs and intentions. Other research was also conducted by Turker & Selcuk (2009) explaining that entrepreneurship education has a positive influence on students. Wilson (2007) emphasized that student self-efficacy for entrepreneurship is a deliberate decision and can be planned and developed through entrepreneurship education. Student self-efficacy in entrepreneurship can be developed early on and through a learning process both on campus, in the family, and in the surrounding environment (Srigustini, 2014; Muliadi & Mirawati, 2020). According to Suryana (2011) that entrepreneurship is not just an innate talent or a mere matter of field experience, but can also be learned and taught. Thus, biology education students can become entrepreneurs if they actively learn to develop entrepreneurial potential in order to be able to seize business opportunities and organize their businesses in realizing their goals (Dewi, 2016).

The results of this study confirm that student self-efficacy and attitudes in entrepreneurship are deliberate decisions and can be planned through entrepreneurship education. This was explained by Santi, Hamzah & Rahmawati (2017) that entrepreneurial knowledge can influence student self-efficacy and attitudes towards entrepreneurship (Subagio, Muliadi & Sutarto, 2021). According to Santoso & Handoyo (2019) and Listyawati (2017) that a person's self-efficacy for entrepreneurship is a factor that initiates the formation of entrepreneurial attitudes and interests (Santoso & Handoyo, 2019; Listyawati, 2017). This is confirmed in Theory of Planned Behavior (TPB) that there is a variable Perceived Behavior Control or operationally it is called self-efficacy, which is a form of a person's self-efficacy (confidence) in establishing attitudes for entrepreneurship from the internal side (Santi, Hamzah & Rahmawati, 2017). Thus, student self-efficacy becomes one of the factors that influence the formation of student attitudes towards entrepreneurship.

CONCLUSION

Based on the results of the research and discussion above, it can be concluded that (1) student perceptions about self-efficacy has an average score of 3.12 in the Good category and an entrepreneurial attitude of 3.06 in the Good category; (2) there is a significant relationship between self-efficacy and student attitudes in the field of entrepreneurship with a significance value of 0.000 which is smaller than the alpha testing value of 0.05 (<0.05); (3) the value of the correlation coefficient is 0.803, which means that the relationship is very strong or very high between self-efficacy and student attitudes in the field of entrepreneurship.

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REFERENCES


