

The Effects of Learning Resilience and Stress on Student Learning Achievement

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Abstract—The purpose of this study is to know the effects of learning resilience and stress on student learning achievement. Samples were selected by random technique, as many as 32 students. Data collection was carried out using two questionnaire instruments (i.e. resilience questionnaire and stress questionnaire), and one learning achievement test instrument. Data were analyzed using inferential statistics, namely multiple regression. Conclusion: resilience has a positive direct effect on learning achievement; learning stress has a negative direct effect on learning achievement.

Keywords—resilience; stress; achievement

I. INTRODUCTION

Students must study more intensively and harder is one of the challenges. Education is increasingly driven by measurable goals and objectives [1]. Thus, students must meet the standards set for them by the institution they are studying in, or by high entry requirements set by higher learning institutions. Given this, students spend a lot of time in their school life to demand the academic activities they hope will make them achieve their academic goals.

The curriculum demands are solid and tend to be heavy. Students often experience anxiety and tend to be stressed [2]. Academic activities require the ability to think abstraction, idealization and generalization of the concepts learned [3]. Therefore, students need their methodology to be able to think what they think. Students should be able to solve problems through contextual metacognition activities based on local culture [4]. Therefore it is important to expand the context and culture in which resilience research is conducted. This reaffirms the importance of considering national culture and context in academic resilience studies [5]. Because of the widespread recognition of academic resilience as a key factor in determining student success or failure, twenty-first century society requires that schools and teachers must increase the resilience of young people [6]. It will also provide a tool to maintain the academic success of those who travel well through school (and beyond). More broadly, we suggest answers to our questions have implications for further development of human capital and community stability [5]. Many formal curricula consider the process of developing adolescents in their designs. While attention is given to schools as an important arena for promoting various psychological strengths among students, a discussion of whether educators

utilize the power of adolescents to guide them through their own learning process is not easily accessible [6].

The results showed a negative statistical correlation between academic resilience and academic saturation ($r(712) = -.24, p < .05$) and academic saturation was predicted negatively and significantly by academic resilience ($\beta = -.21, p < .05$). This finding has implications for teachers and school administrators in improving and enforcing programs that train students about endurance skills [1]. Other studies have found that academic stress levels and social support are moderate, and the level of resilience is quite high. Academic stress is negatively related to social support and resilience. Social support positively affects resilience. Academic stress contributes the most variation in endurance scores. Friend's support significantly moderates the negative relationship between academic stress and resilience. Friend support plays a protective role with resilience in the midst of an academic pressure environment [7]. To deal with such stressful learning conditions for graduate students, resilience is needed from the students themselves. However, this study found that there was a positive relationship between achievement motivation and self-reported GPA in relation to intact home status and race / ethnicity. There was no relationship between resilience, stress, and attainable tendencies in terms of complete housing and race and ethnic status. Also, there is a negative relationship between race / ethnic status and cumulative GPA [8].

Understanding the factors related to academic achievement is important for improving student performance. Research shows that individual resilience and their perception of stress have a relationship with academic achievement and that these two variables are related to each other [9]. A positive correlation was found between endurance and academic achievement. The use of multiple regression found that these two variables, considered together, predicted academic achievement more accurately than individually. This shows low stress perception and high resilience can lead to high academic achievement. This study illustrates the importance of resilience and stress perception in relation to academic achievement. Encouraging these two variables in education can improve academic performance.

Found that mature students can cope better, with resilience being the best predictor. Such findings are useful for those involved in education, because they can identify ways to help

students overcome university life and their careers in the future [10].

There is a linear relationship between resilience (meta-motivation variable), learning approach (meta-cognitive variable), strategies for coping with academic stress (Meta-emotional variables) and academic achievement, which are needed in the context of university academic stress [11]. Regression analysis revealed the relationship between resilience and academic performance (AP) with 10-24% of the differences explained. AP in adolescents from families is associated with psychological care provided by caregivers; individual endurance factors and Sense of mastery associated with AP in adolescent Caucasian housing care; and AP in Romany, adolescent home care is associated with a series of factors: education, psychological and physical care provided by caregivers, emotional reactivity, and length of stay at home care [12]. Thus, we measure effects of learning resilience and stress on student learning achievement.

The results of previous studies on resilience and stress and learning achievement were mostly carried out in high schools, poor families and medical students. In this study, you want to see these variables related to the learning achievement of the master program. Some research results show that they found that children who delay their satisfaction longer will develop higher resilience in dealing with stress and the role of resilience, delay in satisfaction and stress in predicting academic performance [13]. The relationship between resilience and academic performance (AP) with 10-24% of the differences explained. AP in adolescents from families is associated with psychological care provided by caregivers; individual endurance factors and Sense of mastery associated with AP in adolescent Caucasian housing care; and AP in adolescent care in housing is associated with a series of the following factors: education, psychological and physical care provided by caregivers, emotional reactivity, and length of stay at home care. The results highlight the need for individual approaches to promote resilience in various youth groups [14].

Based on the above problems, the purpose of this paper is to describe the effect of resilience on the Learning Achievement and the effect of stress on the Learning Achievement.

II. METHODS

The method used is a survey method with a quantitative research approach. Correlation techniques are used to analyze the effect of the relationship between independent variables, namely resilience (X1), stress (X2), with one dependent variable, Student Learning Achievement (Y). The study population was 189 final Semester (four) Masters Programs at Universities in Bengkulu. Sampling with random sampling technique consisted of 15 men, 17 women, the research instrument used a questionnaire developed from indicators of the theory of resilience and stress, and a Learning Achievement test instrument. The instrument uses a scale of 1 to 5 and tests of validity and reliability are carried out. Data were analyzed using inferential statistics, namely multiple regression.

III. RESULTS AND DISCUSSIONS

Research data were analyzed using multiple regression. The results of testing the hypothesis show that the first hypothesis, the second hypothesis and the third hypothesis are significant. Explanation of hypothesis testing in the form of causality: 1) resilience (X1) with learning achievement (Y), 2) learning stress (X2) with learning achievement (Y), and 3) resilience (X1) and learning stress (X2) together with learning achievement. The results of this study have provided empirical evidence that independent variables of resilience and learning stress also determine learning achievement. We present the explanation of the hypothesis test as follows.

TABLE I. COEFFICIENTS X1

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	94.384	5.588		16.892	.000
X1	.070	.053	.117	.117	.188

^a. Dependent Variable: Y.

Based on Table 1, that the partial correlation coefficient between X1 and Y with X2 is controlled by 0.271, $t_{count} = 2.323$, and the determination coefficient 0.117, then from the results of the calculation between resilience (X1) and learning achievement (Y) with learning stress (X2) controlled is significant, proven valid, $t_{count} = 2.323 > t_{table} = 1.74$ at significance 95% ($\alpha = 0.05$). With determination of 0.117, it is said that the influence between X1 and Y with X2 is controlled by 0.117 meaning that 11.7% of learning achievement is determined by resilience after the effect of learning stress is controlled. In other words the influence between variables X1 and Y still shows significant even though variable X2 is ignored or considered constant. By obtaining a significant influence between X1 and Y, both simple and partial, it can be concluded that the first hypothesis which reads "There is a positive influence between resilience (X1) and learning achievement (Y)" is accepted and tested significantly. Thus: "there is a negative influence between learning stress (X2) and learning achievement (Y)". Furthermore, the influence between X2 and Y is partially tested with other free variables, namely (X1) controlled. The partial test results provide an overview of the significant effect of learning stress (X2) on learning achievement (Y), where resilience (X1) is controlled, with a correlation coefficient of 0.367. The following is presented in the table of partial correlation and regression table, for the significance tests of X2 and Y with X1 controlled.

TABLE II. COEFFICIENTS X2

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	104.822	4.803		21.826	.000
X2	.230	.048	.056	.3.635	.027

^a. Dependent Variable: Y.

Based on Table 2, that the partial correlation coefficient between X2 and Y with X1 is controlled by 0.367, $t_{\text{count}} = 3.635$ and the determination coefficient of 0.273, then from the results of the calculation between learning stress (X2) and learning achievement (Y) with resilience (X1) controlled is significant, it is evident that: $t_{\text{count}} = 3.635 > t_{\text{table}} = 1.74$ at significance 95% ($\alpha = 0.05$). Thus 0.273 can be said that the influence between X2 and Y with X1 is controlled by 0.273, meaning that 27.3% of learning achievement is determined by learning stress after the effect of resilience is controlled. In other words, it can be explained that the influence between variable X2 and Y still shows a significant correlation even though variable X1 is ignored or considered constant. Thus: there is a positive influence between learning stress (X2) and learning achievement (Y). The findings taken from the results of the study show that the resilience variable becomes a very important thing to consider in an effort to improve the learning achievement of Magister students. With the contribution given by the resilience variable of 11.7%, it shows a significant contribution, where learning achievement will increase by 11.7% due to contributions from resilience.

Furthermore, the findings of this study indicate that resilience is one of the most important variables and needs to get attention in order to improve the learning achievement of students at magister program. Variable resilience can be used as a predictor to measure learning achievement. This means that the better the resilience, the better the performance, and vice versa if the resilience is not good then the performance is not good (low). The results of this study reject research findings calculated [15]. In his research entitled: The Relationship between Resilience and Academic Success among Bermuda Foster Care Adolescents, concluded, Results revealed a statistically significant positive relationship between resilience and reading achievement but no relationship between resilience and GPA and resilience and math achievement. The finding of positive relationship between resilience and reading is adequate reading skills. Instead the results of this study support the results of research conducted with the title: The relationship between resilience and academic performance at youth placed at risk which results in regression analysis revealed a relationship between resilience and academic performance (AP) with 10-24% of explained variance [13].

Furthermore, the results of data analysis in this study indicate that learning stress with learning achievement can have a positive and significant effect. This was based on the results of the calculation of data analysis obtained, namely $r_{\text{count}} = 0.367 > r_{\text{table}} = 0.174$, at the real level $\alpha = 0.05$, therefore the null hypothesis (H_0) which states there is no influence between learning stress (X2) and learning achievement (Y), rejected and accepted (H_1), that is, there is an influence between learning stress (X2) and learning achievement (Y). With the existence of a significant influence, the high and low learning achievement can be determined through their learning stress. From the calculation of data analysis, it shows that the contribution given to the learning stress variable is 27.3%, meaning that learning achievement changes by 27.3% because of the contribution of the stress variable of learning. Then it can be said that the contribution of this value is very meaningful for improving learning achievement. Furthermore, the findings taken from

this study through the instruments collected, showed that learning stress is one of the important variables to be considered in order to improve learning achievement. Learning stress factors can be used as predictors to measure learning achievement. This means that the more less learning stress the students have, the higher their learning achievement.

The results of this study support the results of research conducted that students who have academic stress levels are negatively related to social support and resilience [1,6,9,12]. Social support positively affects resilience. Academic stress contributes the most variation in endurance scores [7]. Friend's support significantly moderates the negative relationship between academic stress and resilience. According to him friend support plays a protective role with resilience in the midst of an academic pressure environment.

IV. CONCLUSION

The conclusions of this study are (1) resilience has a positive direct effect on learning achievement. This means that any increase in resiliencies can improve student learning achievement; (2) learning stress has a negative direct effect on learning achievement. This means that any decrease in learning stress can improve student learning achievement.

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