



The effect of motivation and self-efficacy on academic performance with burnout as a mediation variable

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ABSTRACT

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The purpose of this research is to analyze the factors which cause students' academic performance in completing their education, including motivation and self-efficacy regarding academic performance with burnout that the students feel as a mediation variable. Academic performance is an important thing that must be considered by the management of an educational institution in achieving educational goals. The population in this study are active students of the Sapta Samudra Padang Maritime Academy with a sample of 96 active students of the class of 2019-2022. The analysis method used descriptive statistical analysis and factor description analysis using SmartPLS 4.0. The results of this study shows that motivation and self-efficacy have a positive and significant effect on burnout; motivation and self-efficacy have a positive and significant effect on academic performance; burnout has a negative and significant effect on academic performance; burnout as a mediating variable has a partial mediation effect in mediating motivation on academic performance and burnout as a mediating variable also has a partial mediation effect in mediating the relationship between self-efficacy and academic performance.

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1. INTRODUCTION

Education aims to develop a person's personality so that it remains in accordance with the norms and values that apply in culture and society. Based on Law No. 20 of 2003 stated that education is an effort to create a learning atmosphere and a person's learning process in a conscious and planned manner so that students actively develop their potential to have spiritual, religious strength, self-control, personality, intelligence, nobility of character and the skills necessary for themselves, society, nation and state.

Burnout is what is experienced psychologically which involves feeling, motive, and expectation means what he feels is very bad and related to stress or other things (Kelly et al., 2020). When someone experiences burnout, he shows or shows his absence (Sanchez & Breso, 2020).

According to Maslach (2008), burnout is fatigue both physically and emotionally, causing from bad attitudes and impact on a bad behaviours. (Rasip et al., 2020) stated that burnout can occur from what is felt by the workers who are sick, often tantrums,

and others. Employees or contract employees will feel bored, easily offended and others, if assignments are not carried out optimally, the impact is replaced and causes unwillingness or new employees need to work optimally and cause burnout. The impact of burnout for organizations or companies is the decrease in the frequency of coming to work or which affects efficiency. As a result of this, there will be a decrease or poor employee performance, then with the emergence of conflicts within the scope of employees (Atmaja & Suana 2018).

According to (Adam & Hasbullah, 2019) there are several factors that influence studies in higher education; internal factors and external factors. Internal factors consist of creativity, talent and intelligence, motivation, physical and mental conditions, talents and interests. Meanwhile, external factors consist of the physical environment, learning facilities and social environment. According to (Winkel, 2019) diverse, complex and interconnected internal and external factors can influence a student's academic achievement at school or college. Research conducted by (Adam & Hasbullah, 2019) stated that internal factors (intelligence and motivation) influence student learning outcomes more than external factors (social factors and learning facilities). According to (Liu, 2022) several previous studies found several external and internal factors that influence delays in a person's study period, including motivation, family support, interests, talents, and learning facilities and infrastructure. Based on the results of several previous studies, it was found that motivation and self-confidence (self-efficacy) are one of the main factors causing differences in student academic performance.

This research is intended to examine the influence of motivation and self-efficacy variables on the academic performance of Sapta Samudra Maritime Academy students who are students of the Nautical and Engineering study program. This research was conducted on Sapta Samudra Maritime Academy students in the Diploma III Nautical and Diploma III Teknik study programs because there were still students who had not graduated and had not completed their studies. Based on the research, data was obtained that students were unable to graduate on time with the Diploma III study period being 3 years. However, in reality, until graduation in 2022, only 73% of students from the class of 2019 majoring in Nautics have completed their studies, while only 72% of students from the class of 2019 majoring in Engineering have completed their studies. Likewise with the class of 2020, only 30% of students majoring in Nautics were able to complete their studies on time and only 27% of students majoring in Engineering.

The researcher has also conducted interviews with 5 students from the Department of Nauticals and Engineering where the results of the interviews shows that the factors that cause students to be late in completing their studies indicate that students' academic performance is still not good, including a lack of achievement motivation from students. There is still a lack of self-efficacy among students and many students feel tired or burnt out in carrying out various lecture activities.

According to (Paloş et al., 2011) and (Muhammad Yusnan, 2021) motivation has a significant positive effect on student academic performance. Likewise, research conducted by (Liu, 2022), (Yarin et al., 2022) and (Cahyadiana, 2023) found the same results that motivation has a significant positive effect on students' academic performance.

Furthermore, self-efficacy has a positive effect on student academic performance (Mehmood et al., 2019) and (Liu et al., 2019). Likewise, research by (Hayat et al., 2020) and (Alam et al., 2023) states that self-efficacy has a positive effect on student academic performance. According to (Pouratashi, 2018), (Ozhan & Yuksel, 2022) and (Wang et al., 2021) the burnout that the students feel and experience while undergoing education has an effect on the academic performance they will obtain.

Based on the background description above, the researcher is interested in conducting research in the form of a thesis with the title: "The Effect of Motivation and Self-Efficacy on Academic Performance with Burnout as a Mediating Variable (Study on students of the Sapta Samudra Padang Maritime Academy)".

2. RESEARCH METHOD

This research is quantitative research with the purpose of testing a model that reveals the relationship between research constructs. The purpose of this research using the approach (purpose of the study) is hypothesis testing. According to (Sekaran, 2017) hypothesis testing usually explains the nature of certain relationships, or establishes differences between groups or the independence of two or more factors in a situation. Based on the time of collection, this research uses cross sectional data. According to (Sekaran, 2017) research with cross-sectional data can be carried out where data is collected only once, perhaps over several days, weeks or even months to respond to research questions and statements. The object of research explains what and who is the object of research, where, when the research is carried out, the addition of other things needed (Umar, 2015). The object of this research is the Students of Sapta Samudra Padang Maritime Academy.

The population in this study were 262 students of Sapta Samudra Padang Maritime Academy on 2019-2022 those who are still active students with the population in this study were 262 students (source: Sapta Samudra Padang Maritime Academy 2023). This study took a sample of 96 students this study use stratified random sampling. Stratified random sampling is a technique used to determine the sample size, where the population is stratified but less than proportional. Respondent identity was analyzed based on 9 characteristics, such as gender, age, major, class, school of origin, monthly money, residence status, parents' occupation and GPA.

This study uses academic performance as the bound variable. Performance means the academic result achieved by students in completing their educations. There are two independent variables as factors that affect academic performance, namely motivation and Self-Efficacy. In addition, this study uses burnout as a variable that mediates the relationship between motivation and self-efficacy on academic performance. The questionnaire applied a 5-point Likert scale and was guided by a questionnaire that had been developed by previous researchers and modified according to research needs described in Table 1. The questionnaire was given to respondents in the form of angket.

Table 1. Questionnaire References

Research Variable	Author	Number of question
Motivation	Uno (2018)	12
Self-Efficacy	Zimmerman (2018)	10
<i>Burnout</i>	Maslach (2008)	12
Academic Performance	Alindra (2018)	10

This study will use SmartPLS 4.0 for the data analysis method starting from the measurement model (outer model), model structure (inner model), and hypothesis testing (Ghozali, 2018). PLS according to (Ghozali, 2018), is an approach from covariance-based Structural Equation Modeling (SEM) to variant-based. Covariance-based SEM generally tests causality/theory, while PLS is more of a predictive model. PLS is the method and used as confirmation of the study theory. The measurement model test was conducted to measure the validity and reliability tests. While structural model testing is carried out to test causality or to test hypotheses. Data analysis includes outer model, convergent validity, discriminant validity, reliability. and structural model testing (inner model) to test the hypothesis, coefficient of determination (R^2), the relevance of prediction (Q^2), Path Coefficient to describe the results that affect the construct and test the mediation effect.

3. RESULTS AND DISCUSSIONS

To analyze the data in this study, the LRA technique was used, namely, the data for each variable in this study was calculated to know the distribution of respondents' answers to each variable and indicator. Table 2 shows that the LRA of this research variable is in the range of a quite good category to a good category. The highest LRA score is the organizational culture and works stress variables with a percentage of 82,20% while the lowest LRA percentage is the workload variable with a percentage of 79.80%.

Table 2. Results of Descriptive Variables

Research Variable	N	Mean	TCR	Category
1.Motivation	96	3,99	79,80%	Fairly High
2.Self- Efficacy	96	4,11	82,20%	High
3.Burnout	96	4,05	81,19%	High
4.Academic Performance	96	4,05	81,12%	High

Convergent Validity is a construct validity that measures how far a construct is positively correlated with other constructs (Hair et al., 2018). Convergent validity relates to the principle that measures of a construct should be highly correlated. Indicators with a high loading factor have a strong contribution to explaining the latent variable and vice versa the indicators with a low loading factor have a weak contribution to explaining the latent variable. The rule of thumb used for convergent validity is outer loading > 0.7 , if the value of outer loading > 0.7 then it is said that the indicator is valid and otherwise an indicator must be removed from the measurement model when the value of outer loading is < 0.7 and then the model is calculated again. The outer loading value of each research variable can be seen in the figure and table below.

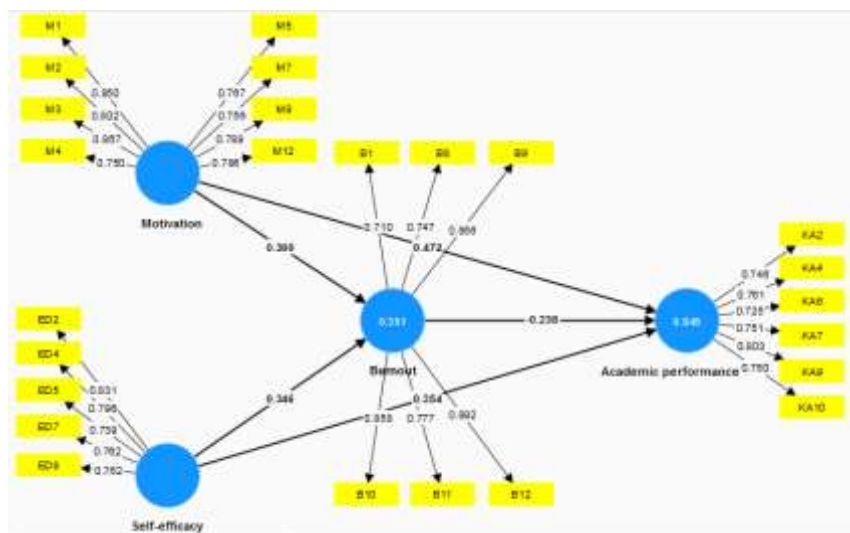


Figure 1. Outer Model

The AVE value describes the big variance or diversity of the manifest variables that can be owned by the latent variable. Thus, the greater the variance or diversity of the manifest variables that can be contained by the latent variable, the greater the representation of the manifest variable on the latent variable. The AVE value is acceptable if the value is above 0.5, meaning that more than half the diversity of the indicators can explain the latent variable. The results show that all variables have an AVE value above 0.5.

Discriminant validity refers to the extent to which certain constructs in the same model differ from each other (Barclay, Higgins, 1995). To test discriminant validity there

are three types of analysis used: Fornell and Larcker criteria, cross-loading, and heterotrait-monotrait ratio (HTMT). Based on the Fornell and Larcker test, cross-loading and HTMT ratios fulfilled the requirements of discriminant validity and are considered valid.

The reliability test is intended to regulate how much measurement can measure with a stable or consistent instrument (Hair et al., 2018). A construct is declared reliable if the value of Cronbach's Alpha and Composite Reliability > 0.7 (Hair et al., 2018). The results of Cronbach's Alpha and Composite Reliability tests have fulfilled the criteria greater than 0.7. Therefore, it can be concluded that all variables are considered reliable or have good reliability to measure the construct.

The next step in testing the structural model is to test the R-square which aims to find out how the relationship between variables, according to (Chin, 1998) the R-square value of 0.67 is categorized as strong, then if the value is 0.33 it is categorized as moderate and 0.19 is said weakly. The results of the R-square test show that the contribution of the influence given by motivation, self-efficacy and *burnout* to academic performance sebesar 0,845 so it can be said that contribution of the influence given by by motivation, self-efficacy and *burnout* on academic performance is strong, so that is shows the accuracy of the prediction of the moderate model. Then the contribution of the influence given by motivation, self-efficacy to *burnout* is 0.351, then the contribution of the influence given by motivation, self-efficacy to *burnout* is moderate, thus indicating moderate model prediction accuracy.

According (Chin, 1998) explains that a model shows a good predictive relevance when its Q^2 value is greater than zero which indicates a good exogenous latent variable (appropriate) as an explanatory variable that can predict its endogenous latent variable. The result of the test is that the structural model obtained has a good prediction of relevance. This means that motivation, self-efficacy are appropriate as explanatory variables that can predict *burnout* then motivation, self-efficacy and *burnout* are appropriate as explanatory variables that can predict academic performance.

Path Coefficient will describe the contribution or influence between variables, carried out through a bootstrapping procedure. Path coefficient evaluation is used to show how strong the effect or influence of the independent variable is on the dependent variable. In short, the path coefficient is used to determine whether the research hypothesis is accepted or rejected. The hypothesis accepted or rejected can be seen on the value of the t-statistical test. If the value of the t statistic is above 1.96 (t-table) and the significance (p-value) is less than 0.05, the hypothesis is accepted. The test results can be seen in Table 3.

Table 3. Hypotheses Testing

Hypotheses	Original Sample (O)	T Statistics (O/STDEV)	P Values	Explanation
H1 : M -> KA	0.472	4.634	0.000	Significant
H2 : ED -> KA	0.354	3.770	0.000	Significant
H3 : M -> B	0.300	2.914	0.006	Significant
H4 : ED -> B	0.346	2.389	0.017	Significant
H5 : B -> KA	-0.238	-3.281	0.001	Significant

To interpret the results or hypothesis testing on the data of the inner model stage, it can be seen from the value of the direct influence of each independent variable on the dependent variable which is shown in Table 3. The results of hypothesis testing are as follows: H1: Motivation has positive and significant effect on academic performance. H2: Self- Efficacy has positive and significant effect on academic performance. H3: Motivation has positive and significant effect on *burnout*. H4: Self- Efficacy has positive and significant effect on *burnout*. H5: *Burnout* has negative and significant effect on academic performance.

This study also uses mediating variables. According to (Hair et al., 2018) argues that the mediating effect explains the influence between the independent variable and the

dependent variable through the mediating variable. The test to find out whether the burnout variable mediates the motivation variable on the academic performance variable and the burnout variable mediates the Self- Efficacy variable on the academic performance variable. The results of the study can be seen in Table 4.

Table 4. Mediation Testing

Hypotheses	Original Sample (O)	T Statistics (O/STDEV)	P Values	Explanation
H1 : M -> B -> KA	0.382	2.930	0.000	Partial mediating
H2 : ED -> B -> KA	0.272	2.849	0.000	Partial mediating

To interpret the results or mediation test on the data of the inner model stage can be seen in Table 4. The results of the mediation test are as follows: H6: Burnout has partial mediating on the motivation on academic performance because the direct effect and the indirect effect is significant; H7: Burnout has a partial effect of mediating self-efficacy on academic performance because the direct and indirect effects are significant.

4. CONCLUSION

Based on the direct relationship analysis of the variables in this study, it is stated that motivation has a positive and significant effect on academic performance; self-efficacy has a positive and significant influence on academic performance; motivation has a positive and significant effect on burnout; self-efficacy has a positive and significant influence on burnout; burnout has a negative and significant effect on burnout. The test of indirect analysis of variables in this study found that burnout can give partial mediating on the motivation on academic performance because the direct effect and the indirect effect is significant; burnout has a partial effect of mediating self-efficacy on academic performance because the direct and indirect effects are significant.

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